

SEMIOTICS 1981

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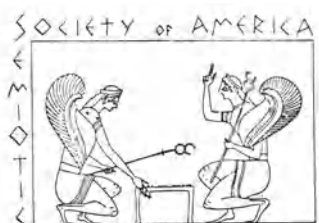
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This volume is dedicated
to the memory of
Harley Shands, 1916–1981,
seventh President of the
Semiotic Society of America,
who died in office.

PREFACE

This volume differs from the volume, Semiotics 1980, in that it is no longer an experimental product, but the result of a permanent commitment of the Semiotic Society of America to publish each year henceforward those papers presented at its Annual Meeting which are submitted to the Secretariat in timely and proper form. Thus Semiotics 1981 marks the beginning, following upon the experimental Semiotics 1980 volume, of an indefinite series of volumes presenting the cross-fertilization of styles, topics, methodologies, and traditions "in which new ideas vie for survival and experiment is at a premium." It is this cross-fertilization which is at the heart of the vitality and integration and redistribution of the world of knowledge.

The historical value of such a record is obvious. But the more immediate objective of these volumes of annual proceedings is to promote participation in the work of "semioticizing" traditional perspectives and disciplines by providing a forum in which young scholars can meet regularly and find an outlet for their efforts at interdisciplinary thinking which are not always welcome in the journals and proceedings devoted to the promotion only of traditionally specialized perspectives.

To reflect as accurately as possible the origins of this collection, the volume of Proceedings will be organized around the panel topics of the Annual Meetings, with the papers presented under these topics arranged alphabetically by authors. To enhance the usefulness of the volume, we have added an index of proper names, and future volumes will be integrated under a common style sheet (replacing the style sheet used for all references in these first two volumes), which will enable us to place all the references together at the end of the volume alphabetically arranged by author and historically layered by year of original publication (in the case of modern writers) or composition (in the case of ancient writers).

Needless to say, an enterprise of this scope is especially indebted to key individuals whose cooperation in a special way made possible the realization of the volume. Special thanks are due to Richard Bauman, under whose Presidency the Executive Board of the Semiotic Society of

America voted to establish a regular volume of Proceedings; to the 1981 Program Committee chaired by the late Harley C. Shands; to the Nashville Local Arrangements Committee chaired by Daniel Patte; to Lisa Berz, Young-ee Cho, and Keith Levon Hayes for their work in typing the manuscripts comprising the volume; to Carl Lenhart for handlettering the Greek script; and to Ann Deitchman-Smith for her fundamental work in preparing all aspects of the final work.

John Deely
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Bloomington, Indiana
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CONTENTS

I. THEORETICAL AND METHODOLOGICAL ISSUES

Figurative versus Objective Semiosis: An Epistemological Crossroads Paul Bouissac	3
Hypersemiosis: Mixed Metaphors as Semiotic Overloading Jean-Claude Choul	13
Cognition from a Semiotic Point of View John N. Deely	21
Icon and Symbol: A Reappraisal of the Resemblance Debate Michael J. Giordano	29
Précis of Merleau-Ponty on Metajournalism Richard L. Lanigan	39
"Worldiness" and the Analytic Truth Alice Newberry	49
The Rheme/Dicent/Argument Distinction Joseph Ransdell	59
The Sign-Status of Specular Reflections Kim Smith	73
Semiotic Phenomenology and Peirce Patrick Sullivan	83

II. SEMIOTICS OF COMMUNICATION

Contexts for Language Learning: Semiotic Perspectives Robert F. Carey	97
The Semiotic Function of Audience Kristin M. Langellier	107

III. APPROACHES TO GESTURE

Exophoric Reference as an Interactive Resource Charles Goodwin	119
Searching for a Word as an Interactive Activity Marjorie Harness Goodwin	129
Sly Moves: A Semiotic Analysis of Movement in Marshallese Culture Laurence Marshall Carucci	139
The Study of Gesture: Some Remarks on Its History Adam Kendon	153

IV. NEGLECTED FIGURES IN THE HISTORY OF SEMIOTIC INQUIRY

Francis Lieber and the Semiotics of Law Roberta Kevelson	167
The Logic of History as a Semiotic Process of Question and Answer in the Thought of R.G. Collingwood Anthony F. Russell	179

V. SEMIOTICS AND LINGUISTICS

The Semiotic Paradigm and Language Change Irmengard Rauch	193
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CONTENTS

xi

What's in a Word? Peter H. Salus	201
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VI. LITERARY AND ARTISTIC SEMIOTICS

Functions of the Index in Narrative: An Outline D.K. Danow	211
Symbiosis and Dichotomy in the Names of Anna Axmatova Sonia Ketchian	223
Representation and Subjectivity in Modern Literature M.E. Kronegger	231
Aesthetic Semiosis of the Visual Object Manuel Gameros	239
Indexicality in Esthetic Signs and the Art of Dante Gabriel Rosetti Joshua S. Mostow	249
Subjects and Objects: Quick Notes on the State of Art History Donald Preziosi	263
Kitsch: A Semiotic Approach Ursula Niklas	273
Talent and Technique in Theatre: A Semiotics of Performing Eric E. Peterson	281
The Semiotics of Godot Compared with Those of the Russian Icon Bernice D. Reid	293
The Teller and the Tale: Sources of Credibility in the Short Story Sarah Brey Simmons	301

	The Guinea Pigs of Ludvík Vaculík: Interrelation of Areas of Reference Bronislava Volek	307
VII.	FOURTH ANNUAL SYMPOSIUM ON EMPIRICAL SEMIOTICS	
	Why Think About a Cognitive Psychosemiotic Theory? Gary Shank	319
	The Tell-the-Tale Detail Marco Frascari	325
	The Semiotic Crisis in Contemporary Hospitals Joan Y. Kahn	337
VIII.	PSYCHOLOGY, SOCIOLOGY, AND SEMIOTICS	
	Who Apes English? Jack K. Horner	347
	Culture and Mind in Peircean Semiotics: One Aspect Terrance King	359
	Sociology and Semiotics: Two Sciences of the Human Regina Jiménez-Ottalengo	369
	Semiotic Theory and Language Learning Nancy S. Thompson	377
IX.	ARCHITECTURAL SEMIOTICS	
	Architectural Semiotic Analysis: A Demonstration Shelagh Lindsey and Irini Sakellariidou	387

"Musement on the Whole"...An Attitude Toward Space Richard Dale McBride and R. Patton Howell	399
X. PEIRCE SPECIAL SESSION	
Mathematics as a Semiotic Factor in the Thought of C.S. Peirce Carolyn Eisele	417
An Outline of the Foundations of Modern Semiotic: Charles Peirce and Charles Morris Eugene Rochberg-Halton and Kevin McMurtrey	423
XI. SEMIOTICS OF CULTURE	
A Comparative Study of Selected Semiotic Elements of Different Branches of Fortune Telling Edna Aphek and Yishai Tobin	439
Icon as Index: A Theory of Middle Byzantine Imagery Deborah Bershad	449
A Critique of Lévi-Strauss' Theory of Myth and the Elements of a Semiotic Alternative James Jakób Liszka	459
The Civilization of Illiteracy Mihai Nadin	473
Myth and Symbol in Vico and the "Romantik": Some Remarks Massimo Pesaresi	483
Social Symbols and Cultural Identity Ma. Luisa Rodríguez Sala-Gómezgil	495

XII. FOUNDATIONS OF OLD TESTAMENT STRUCTURE
AND MEANING

Matrilineal Background of Genealogies in Genesis Dorothy J. Gaston	505
Judges 11:12-28: Constructive and Deconstructive Analysis David Jobling	521
Story Structure and Social Structure in Genesis: Circles and Cycles Terry J. Prewitt	529
Author index	545

I. THEORETICAL AND METHODOLOGICAL ISSUES

FIGURATIVE VERSUS OBJECTIVE SEMIOTICS: AN EPISTEMOLOGICAL
CROSSROADS

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The forthcoming Encyclopedic Dictionary of Semiotics will soon, for the first time, provide the semiotic community with a comprehensive reference book covering, in an ecumenical manner, all the various aspects of what a significant portion of the academic population more or less agrees to call "semiotics." However, it would be a mistake to nurture the illusion that semiotics has come of age and that this voluminous book, with its several hundred entries, will offer at last a systematic and consistant body of knowledge, as for instance a treatise of mechanics or a textbook of histology could do.

Rather, it will expose the Emperor's nakedness,¹ because a thorough listing of the philosophical speculations on semiosis can do little more than delineate the few models conceived by homo sapiens in order to account for the fact that some percepts, in certain situations, yield much greater knowledge than others, and trigger individual and collective responses that are disproportionate with respect to their physical dimensions or the energy they require to be produced.

Undoubtedly this attempt at laying down in alphabetical order, from ABDUCTION and ARISTOTLE to ZERO SIGN and ZOOSEMIOTICS, all the historical figures, the terminologies they produced, and the concepts that were applied in various fields of research, will be an occasion for semioticians to situate and orient themselves on the multiple paths of this age-old quest. But once they have taken a good look at this rich and vast landscape, they may well

wonder, "what next?", because it should be obvious at this point that this impressive collection of technical terms and concepts which reflect the many attempts made over the centuries in order to account for the phenomenon of semiosis, does not provide any compelling explanation but only a set of theoretical views which have drawn no irreversible consequences.² Indeed, contemporary semioticians tend to forget that these clusters of mutually defined concepts originated in particular philosophical schools and were initially designed to account for the phenomena of signification and communication in a manner that was consistent with the philosophical paradigms of these schools.

They have no more operational value than the ancient views of the cosmos or the myths of the origin of fire among oral cultures. They continually generate new distinctions, categorizations, endless lists of new words - as in Peirce or, nowadays, in Greimas - through which autonomous networks of mutually defined terms keep growing, with their own inner logic and energies; if language is indeed a convenient tool for building models of the world, it would seem that nominalism is the cancer that makes models grow in a non-adaptive manner, at least non-adaptive on a global scale. In spite of their verbosity, so-called semiotic theories appear to be below the epistemological poverty line when one tries to derive from them a methodology in order to investigate actual processes of communication and signification. They provide the investigators with an interpretive grid based on a few intuitions or impressions (the concept of sign, for instance) whose various definitions belong to mythological rather than scientific thought - intuitions or impressions which, like mythological thought, are developed and systematized in the form of a self-fulfilling discourse. Peirce exhibits an acute case of this process because the mere combinatory power of the few features he set forth in conjunction with his concept of sign generated an extraordinary number of possibilities whose intensional definition may be clear once all the basic concepts of the system have been sorted out, but whose extensional definitions are bound to create endless problems and controversies inasmuch as - as he often acknowledged himself - no actual instance of processes or objects that can be construed as a sign embodies a single category but a mixture of several. Students who have interpreted semiotic research as consisting of a search for particular kinds of such signs in a given domain have experienced the frustrating elusiveness of their object of inquiry.

In fact those concepts are mainly used to generate tautological discourses.

One of the aspects of such discourses may be worth noting, because it is an aspect which pervades a great deal of the semiotic literature without being noticed. Semiotic theories, which are basically rooted in the puzzlement caused in the human mind by the phenomenon of vicariousness, tend to set forth entities of an ambiguous nature. On the one hand, these entities oscillate indeed between the status of logical necessities within a given philosophical system and the status of psychological realities that should be accessible to direct investigation.³ On the other hand, many theoreticians insist that these entities are not ontological but rather relational, that they should be viewed as attempts to denote dimensions or parameters of semiotic processes; however they are usually rendered in speculative discourses as autonomous parts playing a role in an event. It seems that all these theories, whatever the caution with which they may have been initially formulated, are sooner or later drawn toward some sort of dramatic representation, as if implicit dramatic models were progressively taking over and shaping the theoretical semiotic discourse. This undoubtedly is a consequence of naming assumed functions and hypothetical objects, and henceforth treating them as if they were natural kinds. For instance, the Saussurean (Siamese?) twins, the signifier and the signified, or Sa and Se as they appear in later versions of their epics, seem to be involved in an endless dispute of primogeniture with, at times, overtones of a tragic plot that reminds us of Cain and Abel, if not of the Manichean gods, Ormazd and Ahriman.⁴ But similar observations concerning the narrativization or figurativization of semiosis could be made about the Peircean system which seems to be irrigated by an implicit metaphor of relations and filiations, forming a sort of kinship system, according to which signs constantly generate other signs through dynamic relations in which the mediating terms are bound to be mediated in turn in quasi-genealogical sequences. Is not indeed semiosis an action which involves "a cooperation of three subjects"? (5.484,C,1907).⁵ An investigation of the terminological choices as well as the derivational patterns of the many neologisms coined by Peirce would confirm this view, or so it seems. Metaphoric thinking is of course necessarily involved in any heuristic or communicative processes, but when speculations are carried over several generations and serve as foundations for a

school, originally fertile metaphors transform themselves into sterile dogmas. To return to Saussure, the fortune of the distinction between signifier and signified mentioned earlier betrays its initial function; the disciples have indeed forgotten that it was introduced by Saussure, "faute de mieux", and at a late stage in the system; as to the master's claim that "semiologie" should eventually become a part of general psychology,⁶ it usually causes nothing but embarrassment among the supporters of the Signifier as well as the faithful of the Signified. At least this is almost as amusing to observe as the anthropomorphisation of the "interpretant" in the writings of late-blooming Peirceans.

Semiotics will remain an epistemological dead-end as long as semioticians perpetuate these figurative games, in which relational entities solidify on a frozen stage and become the protagonists of a mythical discourse unrelated to the empirical sciences of their time. The models they propose may have been the best available at the time they were articulated by researchers who were well informed about scientific knowledge at the turn of the century; but now, almost a century later, the crudeness of these models precludes any possibility of going beyond a superficial phenomenological interpretation of whatever is or may be construed as signs and be perceived through the disjunctive lenses of mythical thought.

This critical approach to the scholastic mode which seems to be currently dominant within the semiotic movement as a whole is not aimed at undermining the epistemological validity of the questions and concerns which form the roots of the various semiotic doctrines. It simply calls attention to the often forgotten fact that nominalism (and its free-wheeling categorizations), intuitionism (and its subsequent unbound speculations), and an outward reliance on the principle of authority cannot serve as the foundations for a science of signs. Such a science, so long as its purpose is not merely to achieve inner consistency, should set as its primary goal an in-depth understanding of the way in which organisms make sense of their environment, build projective systems of interpretation, develop ways of communicating their experience in a vicarious manner, build models in anticipation of probable or simply possible experiences and eventually speculate on these very processes. Confronted with the crucial problem of the nature of semiosis,

homo sapiens has constructed some figurative models of explanation, as he did, apparently much earlier, for cosmological phenomena. Some may regret the time when the Earth used to occupy the center of the universe; such a model undoubtedly fulfilled its regulative and predictive functions for a while inasmuch as it could not interfere with survival values, given the strictures imposed by the contemporary technology upon the exploration of the environment. This is not the case any longer. The junkyard of Science is full of discarded models that were at some point, and often still are, both attractive and useful in some of their aspects, but which have become incompatible with long-term survival values.

The issues raised in this paper concern the current epistemological status of the semiotic models. Are they already obsolete? Do they still offer some heuristic value? What kind of models could replace them? Will semioticians disappear with them? Or will semiotics survive as a discipline because it asks pertinent questions that transcend the limitations of the models within which these questions are posed? I would submit that this latter alternative is what probably will happen provided that those currently involved in semiotic research update themselves in the brain sciences instead of fossilizing into dogmatic schools.

But before offering some practical suggestions, let me emphasize that considering semiosis as a function, or rather as a set of functions, of the central nervous system is no more reductionistic than interpreting the mysterious and fascinating movements of the planets in the night sky in terms of the gravitational laws at work in the solar system. Thus, stating that semiosis necessarily has a cerebral realization does not imply that one takes sides in the philosophical debate opposing dualists and monists or idealists and materialists. This epistemological position places itself outside of such sterile controversies, largely because it considers that too much has yet to be known before these arguments can have any substance. Neither does it take the naive view that semioticians should just look at the human brain as their natural object of empirical studies (even were that possible); after all, an "object of study" is always implicitly or explicitly constructed within a theory. However, some theories have so far proven to be better than others inasmuch as they have yielded irreversible consequences that serve, or so it seems, the long-term survival of

homo sapiens. Last but not least, this position does not claim that the solutions to the most crucial semiotic problems are readily available in the neurology textbooks. Brain sciences are very recent. So many other domains of knowledge and so many advanced technologies had to be mastered before they could make their first useful steps that neuroscientists of all specialties seem to agree that their discipline is still babbling. Nevertheless, the cumulative effects of diversified approaches at several levels of analysis, the constant improvement of the sophisticated means of observation that have been and are being developed, and the density of the communication network that ensures a prompt sharing of discoveries, all these factors concur to establish the brain sciences as an epistemological frontier whose conquest appears to be a realistic endeavour within the reach of a few generations, if not sooner.

In this context, it seems that semiotic models, in spite of their mythical qualities, could play a part in helping in the construction of hypotheses in a field that is currently characterized by an overload of chaotic data. It would be presumptuous to claim that these models could solve any problem by themselves, but they certainly could introduce some potentially productive shifts in the formulation of some questions. For instance, if one looks into the numerous case studies provided by over a century of clinical neuropsychology, one soon realizes how crude are some of the tests used by pathologists when they try to relate specific cognitive or communicative impairments to the modification or destruction of some specific brain structures. It would seem that gross categories of impairments such as agnosia or dementia reflect a lack of semiotic sophistication on the part of some neuropsychologists. The discrepancy between the vagueness of these latter categories and the relative refinement of the symptomatology of aphasic disorders reflects the fact that neurologists are usually conversant with at least some form of linguistic models whereas they generally ignore the existence of the more encompassing semiotic models. It is not unthinkable that some of these models would either contribute a more precise diagnosis or help in devising a finer set of localized or selectively distributed brain functions. Conversely, the systematic study by semioticians of the abundant clinical literature would not simply provide them with texts and discourses interesting to analyze, but more importantly would add a pertinent biological dimension to their concern for semiosis

and would make them sorely but healthily aware of their general ignorance of the actual processes upon which semiosis rests.⁷

In addition to the obvious pertinence, for semiotics, of clinical neuropsychology, the vast and fast developing domain of the brain sciences offers a great deal of relevant information: first, there exist a few tentative global theories which are being propounded by neuropsychologists and which should be taken into consideration (e.g., K. Pribram, V. Mountcastle, G. Edelman). Second, many of the experiments performed on primates' brains evince neuro-behavioral data that could have important semiotic implications. Third, careful attention should be paid to the current development of relatively non-disruptive direct observations of the intact human brain such as, to name only a few, evoked potentials measurements, intracranial recordings, and cryogenic depression, i.e., a method by which a brain area can be functionally inactivated through local hypothermia whose effects are entirely reversible.

In conclusion, I would like to submit that only advances in the brain sciences can provide semioticians with a firm foundation for the concepts of sign systems and semiosis, possibly under other names than the ones they have devised and developed so far. Furthering the already abundant investigations of Peirce's or others' systems may indeed be of great historical interest, but one should ask: "What kind of result is to be anticipated? Are there still some crucial truths hidden in Augustine, Poinset, Peirce or Hjelmslev?" Exploring roots can reinforce the feeling of identity, but can at the same time sterilize research, and curtail innovativeness. On the other hand, how can we legitimize, if not by intellectual laziness, the continuing application in research of models about which almost everybody agrees that they are inadequate. It would seem that semiotics is indeed at a crossroads, but some of the paths are definitely dead ends.

NOTES

1. Admittedly, this statement is a provocative exaggeration, that should be immediately qualified. It is indeed not a small achievement to have brought together, in a nearly

exhaustive way, all the existing definitions and discussions concerning semiosis and the various attempts made to apply these concepts in the Humanities, the Social Sciences and, to a lesser extent, some of the Natural Sciences. However, this statement is meant to emphasize that the uncertainty and vagueness that characterize the very concept of sign make semiotics a giant with feet of clay.

2. The successive reading of Augustine, Hjelmslev, Peirce, Poinot and Saussure, for instance, (either in alphabetical or chronological order) does not add up to an operational knowledge about semiosis. The reader is confronted with a variety of speculative models, historically more or less related to each other, and subscribing to one of these rather than another is largely a matter of choice or circumstances. As I have suggested elsewhere (Bouissac, 1981), the most interesting advances in our knowledge of semiotic processes have been achieved independently, or possibly in spite of these philosophical theories.

3. Rhetorical precautions are repeatedly taken by the authors of modern semiotic theories concerning the actual status of their concepts that are introduced sometimes as methodological commodities, sometimes as mere logical constructs, or even some other times as pure metaphorical approximations. But notwithstanding these qualifications, these concepts are all too often "substantified", so to speak, as if they were constitutive parts of the human psyche, and, of course, disciples for all practical purposes believe in their existence.

4. This is not an exaggeration. In spite of Saussure's warnings, many semioticians refer to these two terms as if they were denoting two distinct realities. Typically one hears about a "signifiant sans signifié" (M. Serres, 1981) or about a "code à signifiant zéro" (P. Imbert, 1974). But a special mention should be made of a recent plea by the distinguished poet Henri Meschonnic on behalf of "le signifiant", pitifully neglected, abandoned, excluded, or, even worse, persecuted by the imperialist (fascist?) students of "le signifié", ending with this statement: "le signifiant est le juif de la sémiotique" (1981).

5. I hope that Peirce's devotees will forgive me for this caricature, but their own interpretative writings sometimes yield to this tacit metaphor of kinship and social dramatization of semiosis: "Every sign is an interpretant. It has a significance which it inherits from all the predecessors signs through which it stands for its object" (D. Savan, 1976: 40); "immediate objects and interpretants are intimately

associated with the sign itself" (J.J. Zeman, 1977:246); "in every complicated instance of semiosis we will want to distinguish between the dominating semiosis and all subordinate semioses contained in it" (R. Wells, 1977:103). (The emphases are mine).

6. This was recently pointed out in a stimulating article by Gilles Thérien (1981) exploring alternatives for semiotic research.

7. Besides journals such as The Behavioural and Brain Sciences, Cognition and Brain Theory, or regular publications such as The Neurosciences Research Program Bulletin or the Annual Review of Neuroscience, there exist many useful sources of information among the recent publications in the field. To name only a few: S. J. Dimond's Neuropsychology (1980); K. W. Walsh's Neuropsychology, a clinical approach (1978); Biological Studies of Mental Processes, D. Kaplan, ed. (1980). In my opinion interested semioticians should first approach the field of neuroscience through data-oriented publications rather than through works attempting to present some form of synthetic interpretation such as Blakemore's Mechanics of the Mind (1977) or J. Z. Young's Programs of the Brain (1978) because it is not always easy to assess a theoretical view from the outside of a field and to distinguish between data and risky hypotheses or generalizations. In this context special attention should be called to the forthcoming revised edition of K. Pribram's Languages of the Brain (first published in 1971).

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HYPERSEMIOSIS: MIXED METAPHORS AS SEMIOTIC OVERLOADING

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Since I am about to tackle a virgin field, pregnant with possibilities, I feel obliged to present my point of view straight from the shoulder, with no beating around the bush.

If there is such a thing as a tolerance threshold for mixed metaphors, it sure is reached in this little introduction. I will argue here that mixed metaphors are a misnomer, although the French equivalent ("*métaphores incoherentes*") would confirm this denomination. Incoherence or inconsistency is awkward to use in relation to metaphors since it may very well be the basis of a kind of metaphor isolated by Caminade (1970:135-6) under the label of image. I don't intend to discuss metaphors as such, but only in connection with what I will consider as a specific semiotic production or phenomenon.

Block (1975:12) contradicts Fowler and Fowler (1906:212) as to the number or proportion of mixed metaphors, and links it to the dominance of the spoken word. She also uses a simplified definition which may be of some help to us: "unwitting combination of two unrelated images". Specifically, these images have lost their original "force and vividness" for the speaker who uses two at once. The effect, she says, is often funny.

But, one must ask, is it always so? And is it only the lack of consistency which has this effect? From this point of view, mixed metaphors would be an unsuccessful metaphorical development or a stylistic mishap. One could argue that

mixed metaphor, if not intended, is a product of the hearer or reader, who decodes more than is there.

Metaphor mixing would then be the non-combination of appropriate elements rather than the combination of inappropriate elements: whatever meaning the sequence may have is rejected as ridiculous or laughable.

But Block's definition is a bit restrictive if we are to consider what Fowler (1965:361) called self-consciousness in mixing metaphors, as in the following:

"For, as you know, I sat on the bird-lime like a lamb - if you will pardon the mixed metaphor."

"In my business, if you're not in your own ball park, you can't allow yourself to be at the mercy of the whims of your host - to mix a metaphor."

"We're walking on the thin edge of a razor, and anything could tip the scales. - Well it has certainly tipped your metaphors."

These examples are my own crop, to indicate that metaphor mixing is still in style, but should also serve as an indication that the signalled metaphor mixing does not mix metaphors, but idioms. As I argued in a paper here last year (Choul 1982), idioms are abusively regarded as figurative or metaphorical since they relate more to what Greimas (1960:50) considered at one point as connotation: the assigning of a secondary meaning through a transfer on the signified level, or as I suggested, an inference based on the actual behavioural pattern (real or imaginary) referred to. Idioms are trans-semiotic units which have no other reference than an inference from the social meaning assigned to a pattern belonging to another semiotic system.

Any tampering with such a delicate mechanism is bound to have a serious effect on the meaning process. Before going any further, let's look back on the metaphorical basis of mixed metaphors, and the difficulty of maintaining some kind of relation between "true" metaphors and mixed metaphors.

Generally speaking, metaphors are supposed to be paradoxical to a certain degree since they use simultaneously a relatedness and an incompatibility. They combine, as

Marchand (1960:11) puts it, identity and difference, and there seems to be something that is not fitting, the text element appearing in a counter-determining context (Weinrich quoted by Petöfi 1969:191). Petöfi neutralizes this paradox by placing relatedness and incompatibility on two different levels: the relation is syntactic and the incompatibility semantic. This is fine as a general statement, but syntactic combinations have to satisfy selectional restrictions, and thus metaphors are bound to violate rules, although there may be rule-violations that are not metaphors, as argued by Bickerton (1969:40), who sees metaphors as attribute assignment. This point is also discussed by Lowenberg (1975:321), after Matthews (1971:416). A fuller treatment is found in Levin (1977:49-59), who uses feature transfer to account for metaphorical readings. Thus the combination of identity and difference may be on two different semantic levels, following in some way the Groupe μ 's (1970:107) explanation: an intersecting property (identity) is extended to or transformed into a union.

This would still make mixed metaphors intolerable violations within tolerable violations. Mixed metaphors would maintain the counter-determining elements of the context through a revivification or reactivation (Shapiro and Shapiro 1976:21), and fail to satisfy the classical requirements of metaphors (Fontanier 1968:103): truth, justness, clarity, nobility, naturalness, coherence.

Mixed metaphors would then be a type of meaning trying to bring into co-existence metaphorical and literal meaning and failing to do so. This counter-metaphorical meaning could be described as the unstable result of un-fusing metaphors, inasmuch as we are still dealing with metaphors, which is not necessarily the case, as in "a floor-space with a ceiling of 15 000 feet". Ascribing simultaneously the co-exclusive values of /limit/ and /inner surface of the top of a room/ to ceiling is quite a feat.

The misnaming and hunting of mixed metaphors is linked to a certain conception of language, which, as I suggested last year, can be seen as a desire or tendency to remotivate it and keep it transparent, by going back to the fundamental or original meaning.

This is prevalent in the animistic labels of live and dead metaphors, used by various authors (Fowler and Fowler

1906:212; Gowers 1948:114). Dead metaphors, for instance, have degrees, according to Fowler (1965:359), some are stone-dead, half or three-quarters dead, or just dormant; the terminology is easily biochemical: affinity or repulsion can bring out "stirrings indistinguishable from life", while in effect we are faced with deciding whether or not some words are to be taken in their etymological sense or in their proper or figurative use. Now this is close to talking nonsense. While there is something that deserves a description, it is hardly tenable nowadays (or even after Bréal and Nyrop) to suggest that there can be such a thing as the combination of full signs. In any use of the expression play it by ear there is no way to account for the co-presence of the fifty and some subsenses of the verb to play.

This impossibility makes it difficult to understand the suggestion by Gowers (1948:114) whereby "live metaphors must not be given a context that would be absurd if the words used metaphorically were being used literally." Obviously, their alleged literal use would assign them another meaning, since a metaphorical use corresponds to a different subsense.

The traditional rule, taken up by various authors (Fowler and Fowler 1906:216; Vincent 1936:76; Verest 1939:140), states that the incongruity will happen between words that are grammatically connected or inseparable. They then go on to suggest that in order to avoid mixing metaphors these grammatically dependent words have to belong to the same metaphorical set or combine a metaphor with a literal noun or a truly dead metaphor.

Thus instead of saying someone was squeezed flat by inflation one would say he was reduced to mendicity because of inflation. But this would mean that subsense co-selection between squeeze and inflation assigns /compress/ as a reading to the first and /blowing up/ to the second.

In our earlier example, floor-space would select the reading /inner surface of the top of a room/ for ceiling. There is obviously something wrong with either the phenomenon called mixed metaphors or with what is perceived as metaphors in general.

First, it is doubtful that a metaphor could consist in

fusion as suggested by Turner (1973:131), among others, whereby both literal and figurative meanings are present. This explanation is only an attempt to deal with what is supposed to be a wealth of meaning, or a "swarm of associations" (Britannica 1980:VI:831). But as Greimas and Courtès (1979:226) point out, this is a meaning effect (effect de sens), not necessarily consistent with the reading, as opposed to the traditional view expressed in Vincent (1936:226); a metaphor has more meaning than the direct expression. This can hardly be so, even in the Shakespearian mixed metaphor discussed in the Britannica Micropaedia: to take arms against a sea of troubles. Sea will be assigned a reading very close to /host/, that is /large number/, and no /liquid/ feature will be present.

If fusion (either of signs or meanings within a single sign) were the case, every metaphor would be a mixed metaphor: as with the example discussed by Greimas and Courtès the presence of the feature /vegetable/ in this girl is a rose is obviously debatable.

The comic effect attributed to mixed metaphors would then be the imposition of a feature normally deleted, as in this girl is a rose in my vegetable kingdom, which makes it a pun, just as I got a job teaching in a school of fish.

In view of the semiotic function, this imposed correlation allows us to list the said mixed metaphors along with paronomasia, ambiguity, pleonasm, zeugma and paradox, as a case of hypersemiosis. Hypersemiosis is the contextual or syntagmatic equivalent of polysemy. As with the latter, it is a descriptive notion and does not normally appear in discourse, where syntagmation blocks off or deletes any parasitic feature or reading.

The basic mechanism of hypersemiosis consists in overloading the normal interpretation procedures, by establishing an extra correlation between two or more formants in the utterance. This overloading will hinder paraphrasing or translation, as in the example below:

"Entre deux mots choisir le moindre"

This piece of advice by Valéry imposes a correlation between moindre /lesser/ and the homophone of mots /words/, /maux/ = /evil/.

Hypersemiosis differs from pluri-isotopy as defined by Greimas and Courtès (1979:282) inasmuch as it will not allow simultaneous readings. This is similar to what I examined earlier this year (Choul 1981) under the name of ludisemia: the impossibility of proper paraphrasing due to overloading accounts for the comic effect, or the refusal to play along. In this respect, hypersemiosis is very close to meaninglessness or hyposemiosis, where insufficient correlations make it difficult to assign a satisfactory reading.

Hypersemiosis is technically linked to the reception end of a communication process, and can take place whether or not an extra correlation is imposed by the transmitter. In this way, it accounts for the recognized tendency to see "live metaphors" in perfectly plain words, which I mentioned earlier. For instance, concrete in the following:

"American sociology has always immersed itself in concrete situations"

The normal reading for concrete is /real life/ and for immerse itself /deeply involved itself/, with a perfectly innocuous paraphrase.

Nevertheless, the contiguity of concrete and immerse may generate as extra correlations /put deep under water/ and /mixture of sand, cement, gravel and water/ and these readings will impair a straightforward interpretation.

These extra correlations are not necessarily undesirable and can be highly valued in certain types of writing, at certain times and by certain writers. The grotesque in art and literature is a good example. Closer to use, a suspense writer like J.R.L. Anderson enjoys signalling his mixed metaphors and has at least one in each of his books:

"We ought to get our teeth into those cartridges.
Sorry I'm not really suggesting that we should start biting bullets!"

Newspaper writing uses hypersemiosis to a fair extent, and not necessarily as ludisemia. For instance, Today, a Canadian weekend supplement, recently featured an article on what they called El Salvador's uncivil war.

The latter example exploits a compound absent from the utterance, while the former explicates a contrario an idiom which could have passed unnoticed. The only common characteristic apart from the un-freezing of what I called a semantic parameter (Choul 1982) is the overloading.

The feature clash is obvious in uncivil war, mainly because war hardly connotes /politeness/, an inherent feature of uncivil. The biting bullets which triggers the extra correlation is quite plain, as teeth are used to bite, although this sense of teeth is normally excluded from the reading, since the feature is deleted in the idiomatic meaning. The crowding is far greater with uncivil war since El Salvador as a pure referential brings in the feature /not religious/ of civil, a second extra correlation.

In any case they will follow a basic overloading pattern preventing a satisfactory paraphrase. Extra features and readings are imposed and cannot be combined nor substituted together for the total utterance. The triggering elements may be selectional restrictions, nucleus and peripheral features, presuppositions, entailments and connotative associations, but they always result in an excess of metalinguistic signs.

Overloading and hypersemiosis, as sketched here, have their basis in a non-additive conception of meaning, which does not preclude figurativeness. But again, such a concept will have to be analysed in terms of feature movement and combination. Levin's attempt on metaphors is a good example of what can be done, but metaphor resuscitation which impedes his study should be avoided at all costs and is an illustration of how hypersemiosis can invade the analysis as well. This is generally the result of a fascination with the signifier (la fascination du signifiant).

To conclude briefly, this suggests that the semiotic function does not consist in piling up a maximum of meanings, but seeks an optimum, that is making sense through the appropriate correlations. Although I dealt mainly with mixed metaphors, hypersemiosis is not strictly linguistic. The old European stop sign, now being replaced, was a clear case of hypersemiosis, as is the new Canadian sign indicating the way to railway stations.

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COGNITION FROM A SEMIOTIC POINT OF VIEW

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"Cognition," knowing in the widest sense of the term, as including all processes of awareness by which experience is built up, is the term used traditionally to designate those aspects or elements of experience which are distinguished from the dimension of appetition, the observable tendencies of entities to locate, move, or interact in whatever ways, both independently of cognition (natural appetite) and dependently upon it (elicited appetite: feeling, desire, will). As such, cognition not only can be considered from a semiotic point of view, but must be so considered if we are to arrive at an adequate understanding of what is proper to it, inasmuch as it is equivalent to a process of communication by signs, or semiosis.

The grounding of this thesis can be undertaken in two ways, one indirect and historical, the other direct and doctrinal. Here, I attempt only to sketch an historical approach.

The thesis that cognition requires a semiotic perspective for revealing what is proper to it receives striking, if indirect, confirmation from the fact that the characteristically modern and contemporary pre- or even anti-semiotic approaches to cognition from the time of Descartes, both in philosophy and psychology, have led to insoluble dilemmas of solipsism--so much so, that recent analysts (e.g., Hebb, Kubie, Lashley 1954: 404, 446, 424 respectively) have taken the tack of consciously denying the very existence of consciousness, i.e., of cognition as a process distinct from and superordinate to the physico-chemical processes of pre-conscious life and material interaction.

What has led so many seemingly intelligent people into such absurdity? Ideological considerations aside, it is precisely the absence of semiotic perspective in the epistemologies and psychologies of modern times which has created the aporias leading contemporary analysts into self defeating reductive research strategies. This can be shown both with regard to the early modern philosophers who achieved practical agreement in an anti-semiotic definition of ideas as the internal means of cognition, and with regard to their contemporary heirs who have used the resultant wholly unnecessary conundrums as grounds for denying the reality of consciousness tout court.

Let us begin with the early moderns, notably Descartes and Locke. These men set the direction for modern epistemology and psychology by defining ideas as the object of our immediate apprehension. From these mental products directly apprehended, they sought to infer the existence of things--extramental entities--as the "causes" somehow represented by our ideas, thus opening the way to the famous "problem of the external world." For the actual groundlessness of such an at first glance warranted inference was soon enough shown, first by Berkeley (1710)--who called the belief in natural entities "an opinion strangely prevailing amongst men"--and then by Hume (1748), and indeed can be seen by a simple consideration: Since you have your ideas and I have mine, and each of us knows directly nothing but his or her own ideas, how is it possible for there to be a public object or communication about any object? For ideas are private to each one of us, and these private mental entities are alone what we know. The Kantian solution to this dilemma (1781, 1787), that, though the appearances of the world in experience are private constructs for each, they are yet the same for each of us because the constructive rules and mechanism is the same for each human mind as such--is "species-specific," as we say today--would explain (as would also Leibniz's pre-established harmony) why we seem to communicate and why objects seem to be often public, but the reality--that communication and public life are only apparent--remains as the distinctive modern heritage of cognition theory in philosophy. It is taken over in psychology through Brentano (1874, 1911) and others, and continued in philosophy by thinkers otherwise as diverse as Bertrand Russell and Edmund Husserl.

Locke's role in this modern development is curiously ambivalent. An inveterate believer in the external reality of things, he developed his account of knowledge on the basis of

principles inconsistent with that belief. Still more curiously, he concluded his lengthy account of knowledge by suggesting that its starting point in the identification of ideas with the direct objects of our cognition may have been ill-considered, and that a better account might be arrived at by considering words and ideas alike strictly as signs--that is, from a semiotic point of view. Locke's closing suggestions were destined to be ignored until the most recent time, while his opening identification, after Descartes, of "ideas" as the mind's own product, with the direct objects of perception and understanding, was to become the common point of doctrine identifying characteristically modern philosophy beyond its division into "rationalist" and "empiricist" strains.

This common point of modern doctrine became, in the contemporary period, the opening wedge for the reductivist arguments of behaviorist psychologists and analytic philosophers denying the very existence of ideas and "consciousness" in favor of the adequacy of "brain states and processes" to account for human experience in its totality. Contemporary "empiricists" and "linguistic" philosophers ("analysts") have lately repudiated ideas on the grounds that we have no direct awareness of such entities in our experience of discourse, that is to say, we have no direct awareness of entities distinct and separate from the objective "physical" being of marks seen and sounds heard. Therefore, conclude these contemporaries (e.g., Ryle, Alston, Quine), there is no reason to believe such entities exist, and the "mental" may not be so much explained as explained away in terms of the physical--specifically, in the form of neurological states and processes.

Now let us see what happens when the analysis of cognition--of objects given in awareness--begins from a strictly semiotic point of view. From such a standpoint, as Locke remarked, ideas must be from the first considered as signs. What does this imply? Consider how signs function in our experience of what is essential to them as signs: they bring into awareness something other than themselves, what they themselves are not. Immediately we are struck by how much closer to unreflected usage in the natural languages such a formula brings us when applied to ideas than does the standard modern formula which makes of ideas objects in their own right. When we think of some natural or cultural entity--a tree, say, or a flag--we are not aware of any "mental state" as such. Rather, we are aware of a tree or a flag, something an idea most emphatically is not. At the same time, it is clear that a tree we are looking at, in order to be present not merely

in the physical world but in our awareness as well, requires for this relative-to-an-observer existence some factor within the observer on the basis of which the tree existing in nature also exists as the term of his or her awareness of it. This intraorganismic factor on the basis of which a given object, concrete or abstract, perceptual or conceptual, real or unreal, exists for an individual as something of which that individual is aware, i.e., as a terminus of his or her cognition, is what an "idea" is seen to be from a semiotic point of view. Of course, any object, once cognized, may further become a sign in its own right for the one cognizing it, as a certain tree may lead the biologist on to consider an entire evolutionary history, or the lover to recall a tryst.

But note the procedure here: The basis for positing the existence of ideas is our awareness of objects, not, as in modern philosophy or the introspective psychology that preceded behaviorism, the other way around. Conformably with our spontaneous interpretation of experience and in line with the opinion "strangely prevailing among men," we affirm first the indubitable experience of apparently cognition-independent things, both natural and artificial, of which we become aware; and from the fact of that awareness we infer the existence--both signified (ut significata) and exercised (ut exercita), and as proportioned to culture as well as to social organization (ex instituto et ex consuetudine simul)--of ideas. Not things from ideas, but ideas from things in their semiotic status, that is, as encountered apprehensively.

In other words, in approaching cognition from a semiotic point of view, the first requirement is to distinguish between signs which make possible the existence of objects cognized--ideas in the generic sense--and signs which must be perceived as objects even in order to function as signs. Both types of signs, those which are such precisely because they are not what we directly apprehend and those which are such precisely as part of what we are directly aware of, function as signs in exactly the same way, namely, to bring to awareness another than itself. This precisely is the relativity constitutive of the sign in its proper being. But signs of the former sort, ideas (or "concepts and images"), are not known or knowable through direct perception. On the contrary, they are cognized, if at all, only on reflection, and as the foundation or ground in the knower of what is apprehended directly. As private, i.e., inasmuch as each organism forms its own ideas, they are not objects at all, but the foundation or basis for relations

of cognition to objects, real and unreal. Thus solipsism is overcome at a stroke, and the semiotic approach to cognition explains the possibility of communication in the same way that any two things can be related to a common third. Ideas as belonging to an individual are private, but as signs they relate that individual to objects that are other than his or her private states, objects that still other individuals may also form "ideas of," and so enter into communication about through the use of extraorganismic elements--such as sounds, marks, or movements--as signs. Signs of this latter sort, being fundamentally objects first of all, may or may not be successfully used to signify in any given case--as the first time visitor to a foreign culture learns all too well. Their being as signs depends on their being as objects, and their being as objects depends on their ontological difference from the being as signs of ideas, the intraorganismic factor identified above.

In short, the definition of ideas as objects of awareness which Descartes made the center of his Meditations (1641) and with which Locke began his Essay (1690), the definition which unremittingly influenced the classical modern formulation of theories of knowledge and psychology, especially in the work of Hume with its impact on Kant (awakening him from one "dogmatic slumber" only to induce another far deeper), is incompatible with common experience and impossible with the definition of ideas as signs which Locke proposed on concluding his Essay. If, as the very brief remarks foregoing strongly suggest, the concluding proposal is more sound than the opening one, it is not too much to say that the introduction of the semiotic point of view into the account of cognition portends a revolution for philosophy and psychology alike, and an end to the modern era of solipsism and reductionism.

How this is so may be further briefly indicated. Let us ask whether ideas as semiotically conceived, that is, as signs, might not be simply states of our nervous system. The answer is that ideas and neural conditions cannot be so identified, for the reason that brain states are in principle (under appropriate instrumentation) directly apprehensible, while, by contrast, ideas in principle--that is, in order to be ideas and to function according to the rationale of their admission as real--are not directly apprehensible, but are rather that on which every sense perceptible object as actually perceived here and now depends. Let us call them "mental events" in contrast to "physical events," that is, in contrast to items of possible direct and sensory apprehension. Thus, in a sem-

iotic perspective, the same reasoning that leads us to affirm the reality of ideas as mental in contradistinction to brain states as physical, also requires us to preclude the reduction of the mental to the physical, and to preclude as well identification of the mental with that of which we are directly aware in cognition. The reduction is incompatible with the semiotic (sign) structure of apprehension itself as underlying all observation and constituting the ground of its prior possibility.

Moreover, this analysis removes the principal ground on which behaviorists and analytic philosophers have repudiated the existence of ideas, namely, the ground that we have no direct awareness of them in our experience as something distinct or separable from the objective "physical" being of the marks seen and expressions heard. Indeed, the thrust of this argument is heuristically just what the semiotic analysis of ideas would lead us to expect. In short, the line of argument from which contemporary Anglo-American analysis of language rejects the existence of ideas in the modern sense, supports the acceptance of the existence of ideas in the semiotic sense, i.e., as making present in our consciousness objects which they themselves are not.

This brings us full circle from the point at which we started. The recent attempts of mainstream philosophers to explain away the mental somehow in terms of the physical is shown by semiotic analysis to be misguided. That same line of analysis demonstrates the wrongheadedness of the more enduring modern tendency to close thought within its own constructions, with the result of making experience of communication unintelligible or merely apparent at best. What the analysis of cognition from a semiotic point of view quickly reveals is that the solipsistic and reductionist tendencies of mainstream modern and contemporary philosophy and psychology have as their common root an inadequate understanding of the phenomenon of signifying which is at the heart of cognitive life. The counter to both these tendencies, accordingly, and the opening of a new era of understanding, can be found in a careful establishment of the foundations of the doctrine of signs (semiotic in the strict sense) and in the extension of such analysis to all the phenomena of which signs make up part (the interdisciplinary field of semiotics). The possibilities of such a work and perspective seem to have been first secured systematically as early as 1632 in the Treatise on Signs of John Poinset (Deely 1974, 1978, 1982); while the actual project has begun to go forward only in most recent

times (see Sebeok 1974, 1975) and is particularly well exemplified in the extensive writings of Charles Sanders Peirce, who must be regarded as the principal contemporary founder of semiotic doctrine.

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ICON AND SYMBOL: A REAPPRAISAL OF

THE RESEMBLANCE DEBATE

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Semiotics has been traditionally based on such oppositions as conventional/natural, arbitrary/motivated, digital/analogical. While such oppositions have proved useful in classifying signs, mutually exclusive typologies are inadequate foundations for semiotics.

The purpose of this paper is twofold: (1) to demonstrate the fallacies of basing semiotics on mutually exclusive typologies; (2) to show that pragmatics more accurately describes signification than does classification.

I would like to restrict the theoretical context of this argument to Peircean semiotics. My reason for so doing is that his work exemplifies both the problems of mutually exclusive classifications and also a solution to these problems.

In Peirce's earlier work, he defines the classes of each trichotomy of signs as non-intersecting sets. That is, he so phrases his definitions as to make signs non-intersecting categories. In the second trichotomy, for example, he defines an index as "a sign which would, at once, lose the character which makes it a sign if its object were removed, but would not lose that character if there were no interpretant (Buchler, p. 104).¹ This same mutual exclusivity applies to the other sign categories as well. For instance, in the first trichotomy, composed of qualisigns, sinsigns, and legisigns, anything that is a member of one of these classes is not a member of the other.²

But such mutually exclusive typologies are inconsistent with two other components of Peirce's semiotics, ground and context.³ The ground of the sign is that specific characteristic of the representamen which is essential to the sign-function. But the ground presupposes and depends upon a context. Thus, the sign is never categorically fixed but rather is subject to contextual variation. Consequently, there is a tension in Peirce between the idealist who isolates signs according to certain tripartite metaphysical classifications, and the pragmatist who views meaning as use. Since Peirce associates knowledge and the real with the positions taken by the community of rational inquiry, I wish to place Peircean semiotics in the pragmatic perspective.⁴ Specifically, I wish to examine the relationship between the sign-function and the concepts of ground and context.

Peirce gives a number of descriptions of the term ground, one of which we shall repeat here: "The sign stands for something, its object. It stands for that object, not in all respects, but in reference to a sort of idea, which I have sometimes called the ground of the sign" (p. 99). Feibleman interprets this to mean: "a sign stands for an object to an interpretant in some respect, that is, it represents the 'common characters' of that object, (2.418) and this respect is called the ground."⁵ In other words, the ground is the way in which the sign-vehicle is related to the object. It indicates the way the attributes of the representamen and the object are made pertinent to the sign-function. To phrase this differently, the ground is the way that the interpretant determines the relation between the sign-vehicle and the object. If I see a person using a pointer to indicate a location on a map, not every empirical detail of the pointer or of the map is relevant to the sign-function. It matters not if the arrow is yellow or the map is thick. What I am interested in is the apex of the pointer and the actual location that it indicates. The ground is what can be comprehended and transmitted of a given object under a certain profile.

The ground is motivated by the context. By definition, if the ground is the way in which the sign-vehicle relates to the object, then the ground presupposes a context. The pointer indicating a location on a map may presuppose, for example, a military briefing session or a lesson in the classroom.

The upshot of the notions of ground and context is that signs are signs in virtue of use and not in virtue of a priori classifications or mutually exclusive typologies. The context is essential for understanding the use of the sign. And the use of the sign defines the nature of the sign.

Let us take, for example, a landscape painting. According to Peirce's second trichotomy, the painting would be an icon or hypoicon. But signs never exist outside of a context. If the landscape painting were in a museum, then the painting would be considered an icon. However, a new context would change the ground of relations. If the same paintings were captured in a war, and used to indicate or point to the places of enemy positions in a briefing session, then such paintings would become symbolic indices. The new context changes both the ground and the sign-function, even though the sign-vehicle remains the same.

This example shows three errors of those who would conceive of signs as mutually exclusive typologies. The first misconception is to identify the sign-vehicle with the sign-function. Empirically, the sign-vehicle is a complex of attributes, but it is the context and ground that define how and what features of the vehicle become functional. In the context of the briefing session, the landscape paintings become indices of enemy positions if used to point to their location. The landscape of the picture is irrelevant to the sign-function.

A second misconception, one apparent in Peirce's earlier work, is that signs are mutually exclusive even within the sign-function. Supposedly, if a sign-vehicle functions as, say an icon, it cannot at the same time function as a symbol or an index. But we can see from our example that the sign is a mixture of sign-functions, one or some of which predominate depending on the particular aim of semiosis. Thus, the landscape paintings used to indicate enemy positions are primarily indexical. And because of the new ground, there is a new code which makes them symbols. Finally, the paintings if arranged as an outline of enemy locations would become icons. But they are not icons as landscape paintings but as a diagram of the location and strategic formation of the enemy.

The final and most serious misconception of the typologist is to confuse a system of relations with the sign-vehicle. When, for example, Peirce gives us his three trichotomies of signs, he supplies examples to illustrate such signs. Peirce's third trichotomy consists of qualisigns, sinsigns, and legisigns. The color red would be an example of a qualisign, which Peirce defines as "a quality which is a sign" (p. 101; p. 115). Yet, by Peirce's definition, all signs are signs in virtue of a three part relation which is composed of representamen, object, and interpretant. This three part relation, in turn, depends upon context and ground.⁶ Such relations are abstract structural spaces that account for variance in the way that signs are used. Therefore, that which is permanent and stable is the conceived system of relations; that which is changeable and contingent is the actual sign-vehicle. Given the infinite possibilities of semiosis within this triple relation (representamen, object, interpretant) the color red can never be classified as a qualisign exclusively. The attributes of the sign-vehicle do not by themselves determine the sign-function. As we have seen, this is the job of context and ground. As David Savan points out, when one takes a color chip to the paint merchant to show him a sample of the color one wishes to purchase, the predominate function of the chip is indexical---a sinsign.⁷ Moreover, the sinsign is always to a certain degree a replica of a legisign. That is, the chip used indexically instantiates a habit or practice shared by buyer and merchant. No sign-vehicle, such as the color red, a landscape painting, or the chirping of birds, belongs exclusively to a certain sign class. Rather, the sign vehicle must be placed in the framework of relations to determine its sign-function.

Drawing up a typology of signs may lead one to undervalue the sign-function or to minimize the dynamic and complex nature of contextual determination. The curious aspect of the typologist's approach is that his very classifications come from examples of sign-functions. He imagines situations or recounts real situations in which sign-vehicles are used in certain ways. Yet, in spite of the original need to relate the sign-vehicle to the context, his next step is to list his classifications. For example, Guiraud, in *La Sémiologie*, lists two main categories of signs: the logical and the expressive sign. Under the first heading we find conventional, arbitrary, homological. Under the second heading, we find natural, motivated, and

analogical. He characterizes these two central oppositions as a "mutual repulsion . . . between logical signs and emotion".⁸

D'où entre les signes logiques et l'émotion d'une part, et de l'autre, entre les signes expressifs et la compréhension une véritable allergie: les modes sémiologiques de la connaissance intellectuelle n'ont pas de prise sur l'expérience affective et inversement. C'est ce qui rend si difficile et si précaire l'étude scientifique des phénomènes affectifs, dans l'impossibilité où se trouve l'esprit de définir et de structurer, c'est-à-dire de "comprendre", des termes tels que passion, désir, émotion. (Ibid.)

However valid and necessary be these distinctions, they breed misunderstanding. Guiraud exemplifies the expressive category by poetry. Yet, in a certain context, poetry could be construed as having an objective function. If an archaeologist wished to reconstitute, say, the linguistic code of a lost or remote civilization, and his principal artifact were a poem, the poem would have a primarily referential or objective function. Indeed, this would also be true if the archaeologist read the poem with the goal of trying to capture its emotional character. For he may wish to gain an insight into what pity was like in this civilization or some other emotion. In this case, the poem could be read as an objectification of an emotional state. The context and ground can and do produce such sign-functions. We know that Aristotle's use of the word is not the same as Christian pity.

As we have indicated, Peirce himself came to revise (in "On the Algebra of Logic") his earlier view of the mutual exclusivity of signs. Professor Fisch has pinpointed Peirce's rationale for this change of mind:

It follows that, just as the world does not consist of two mutually exclusive kinds of things, signs and non-signs, so there are not three mutually kinds of signs: icons, indices, and symbols. These are rather elements or aspects of semeiosis that vary greatly in relative prominence or importance

from semeiosis to semeiosis. We may therefore call a sign, for short, by the name of that element or aspect which is most prominent in it, or to which we wish to direct attention, without thereby implying that it has no element or aspect of the other two kinds.⁹

One important reason behind the practices of seeking mutually exclusive typologies or of limiting semiotics to one kind of sign (natural or conventional) is the desire to achieve scientific precision. Any true science necessarily limits itself to a particular object and method. But the goal of precision should not simplify or distort the object under study. This is true for semiotics. The basis of semiotics is pragmatics. As such, the sign-function can never be restricted to a priori typologies or preconceived classifications. The sign-function can never be limited to one type of sign; nor is the sign determined by intrinsic properties alone. Rather, the context and ground of use will indicate what features the sign-function makes use of in the representamen and object. Symbols, icons, and indices interpenetrate in the sign-function, and one or some of these signs will predominate depending on the goals of semiosis. Here is one more illustration of this point.

A psychopathologist would find in Dylan Thomas' poetry the natural signs or symptoms of schizophrenia: klang associations, telescoping of ideas, agrammatism, and seemingly insignificant allusions. Critchely, in a book entitled Aphasiology, claims to have selected the following poem by Thomas at random:

Sir Morrow at his sponge
 (The wound records)
 The nurse of giants by the cut sea basin
 (Fog by his spring
 Soaks up the sewing tides).
 Tells you and you, my masters, as his strange
 Man morrow blows through food.¹⁰

The critic Henry Treece wonders, as a result of such lines, if Thomas is a fake (ibid.). But this very question reveals a mentality that would isolate natural indices from the conventions of modernist poetry in particular

and poetry in general. Poetry, since it stresses the paradigmatic or metaphoric axis of language, tends by its very nature toward what Jakobson has termed combination disorders.¹¹ That is, a breakdown in syntax in which metaphoric or iconic language compensates for a deficiency in concurrence or concantenation. If we grant that Thomas' lines include both the natural signs of aphasia and the conventional signs of poetry, then we have a more comprehensive account of these words than would be possible by the mutually exclusive concept of signs. The genial but pathological poet can so exploit poetic language as to make it a surrogate discourse, perhaps the only satisfying means of communication. Consequently, the full context of Thomas' poetry reveals a vanishing point where the natural indices of aphasia and schizophrenia and the conventional signs of poetry merge and converge.

The value of semiotics is that it provides a metascience that can study various disciplines at a higher level of generality than any one of these particular disciplines. But to approach signs as mutually exclusive functions is to undermine the generality that semiotics seeks to achieve. The goals of scientific precision and reduction should not undercut the equally pressing needs for comprehensiveness and complexity. To realize such goals, I would suggest the following three points: (1) semiotics should be based on pragmatics and on the study of the sign-function; (2) the best key to understanding the sign-function is through context and ground; (3) signs are highly complex functions which, far from being mutually exclusive, mix and conflate nature and culture.

NOTES:

1. Unless otherwise indicated, references to Peirce will be taken from Philosophical Writings of Peirce, ed. Justus Buchler (1955).
2. David Savan in An Introduction to C. S. Peirce's Semiotics (1976) is very perceptive on how context shapes the nature of the sign: "Empirically, no sign belongs exclusively to one of these classes" (qualisigns, sinsigns, legisigns), p. 14.
3. Peirce came to change his mind about the mutual exclusivity of signs in "On the Algebra of Logic" (1885).

4. "In sciences in which men come to agreement, when a theory has been broached, it is considered to be on probation until this agreement is reached. After it is reached, the question of certainty becomes an idle one, because there is no one left who doubts it. We individually cannot hope to attain the ultimate philosophy which we pursue; we can only seek it, therefore, for the community of philosophers. Hence, if disciplined and candid minds carefully examine a theory and refuse to accept it, this ought to create doubts in the mind of the author of the theory himself" (p. 229).
5. An Introduction to the Philosophy of Peirce (1969), p. 89.
6. Context is at a different conceptual level than ground in that context motivates the ground.
7. Savan, p. 14.
8. "D'où entre les signes logiques et l'émotion d'une part, et de l'autre, entre les signes expressifs et la compréhension une véritable allergie," La Sémiologie (1973), p. 15.
9. See Max H. Fisch, "Peirce's General Theory of Signs," in Sight, Sound, and Sense, ed. Thomas Sebeok (1978), p. 44.
10. Aphasiology and other aspects of language (1970), p. 359-361.
11. "Two Aspects of Language and Two Types of Aphasic Disturbance," in Fundamentals of Language (1956), p. 71.

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PRÉCIS OF MERLEAU-PONTY ON METAJOURNALISM

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Attica is a political memory. On September 13th of this year, 1981, we mark the tenth anniversary of a ten minute period at the New York State Correctional Facility at Attica, New York in which forty-three inmates and employees died, thirty-nine under gunfire by police and National Guard troops. There are in comparison to the Attica prison rebellion worse examples of property damage to a penal institution. For example, the twenty million dollars worth of physical damage during the eight days of rioting at the state prison in McAlester, Oklahoma in 1973. There are worse examples of bloody mayhem, such as the riot at the maximum-security prison in Santa Fe, New Mexico during 1980 in which thirty-three persons died. "Yet Attica remains the yardstick (Associated Press, 1981)."

But, of what is Attica the measure? We should not be too hasty in perceiving Attica as only a criterion for penal disorders. We should consider the political characterization of Attica as a rebellion rather than a riot. The incidents at McAlester and Santa Fe are only riots. Attica is rebellion. As Foucault reminds us in his discussion of the American historical model of prisons, the Auburn, Massachusetts prison of the Nineteenth Century: "The prison must be the microcosm of a perfect society in which individuals are isolated in their moral existence, but in which they come together in a strict hierarchial framework, with no lateral relation, communication being possible only in a vertical direction (Foucault, 1979; 238)."

Attica is a rebellion because Attica is an open,

organized, armed resistance to the power of authority on the Auburn model. It is overtly a rebellion against the penal institution and its vertical structure of communicative authority. And yet, Attica is a story about people, about individual lives suddenly and unexpectedly brought to their most existential moment. Attica is a covert rebellion of human dimension against the moral failure of the idea of the prison as a "perfect" society (Wicker, 1975; 64; Foucault, 1979; 305). This covert rebellion by prisoners is the demonstration of political necessity in society, i.e., the personal and social demonstration of human society, of civility, and of morality. Thus, the Attica rebellion marks a social and political paradigm crisis in communality. Attica in the Twentieth Century exists as the anomaly for the historical Auburn model of the Nineteenth Century that yet endures.¹ Attica is a sign of Auburn. Attica is an emblem of failed civility. Attica is an appeal for a communicative ethic.²

The analysis that follows is my attempt to indicate the manner in which Merleau-Ponty offers us through his semiotic phenomenology a philosophic and theoretical account of human communication as coded in the genre of mass communications. This account is his essay "On News Items" ("Sur les faits divers") can be extended functionally to Wicker's A Time to Die. This book recounts Wicker's experience as an observer and reporter for The New York Times during the Attica rebellion. I propose to develop here the analysis of the Attica problematic and thematic in several parts. First, there is a brief discussion of metajournalism and its philosophic grounding in Merleau-Ponty's essay. Second, I suggest the phenomenological way in which Wicker's book is an illustration of Merleau-Ponty's semiotic metajournalism. Third, I intend to offer at a later time and in a more detailed paper some interpretations of metajournalism as a political code in constituting what Apel (1972; 225ff.) calls the Kommunikationsgemeinschaft.

MASS COMMUNICATION AS SEMIOTIC PHENOMENOLOGY

Merleau-Ponty (1964) begins his essay "On News Items" by recounting an incident he witnesses in the railway station in Genoa, Italy during Italy's Fascist period. The incident is a man who jumps from the passenger platform in front of an oncoming train. It is an act of suicide. A crowd of people rush to witness the event and are harshly rebuffed

by the police.

This blood disturbed order; it had to be quickly wiped away, and the world restored to its reassuring aspect of an August evening in Genoa. All dizziness is akin. By seeing an unknown person die, these men could have learned to judge their life. They were defended against someone who had just disposed of his own. The taste for news items is the desire to see, and to see is to make out a whole world similar to our own in the wrinkle of a face (p. 311).

The facial grimace of the witness to self inflicted death is a discourse of simultaneity. The nonverbal communication of the facial gesture is at once a sign, an emblem, and an appeal. The facial discourse as a sign contains a politically unacceptable signification. The gesture is a lateral communication of equality between the suicide victim and the witness. Each acts in opposition to established order. The act of personal freedom in suicide violates the social norm for order. And in the act of recognition, the witness admits the possibility of violation, itself a violation--but now one of political consequence. The recognition brings with itself the possibility of alternative norms, i.e., lateral communication can codify a moral hierarchy competitive with that of vertical communication. The blood of the suicide and the grimace of the witness are the same signified. They are an emblem of authority, a free use of the human body which commands political force. The signifier is, of course, the appeal to authority that is the expressive and communicative power contained as a communality in the shared actions of the suicide victim, the witness, and the rebuffing police officers. The signifier is what each person desires to see. "Seeing is that strange way of rendering ourselves present while keeping our distance and, without participating, transforming others into visible things (Merleau-Ponty, 1964; 311)." The experience of the body coupled with the consciousness of choice powerfully codes the emblem in the appeal as a sign of political discourse. In his semiotic phenomenology, Merleau-Ponty specifies therefore the conscious experience that is a political discourse of authority in and for the individual person. But, can this conscious experience be a product of the mass media? Does the text

of mass communications signify a personal ethic with moral and political consequence?

Affirmative answers to the questions posed exist with an American or European flavor under various nomenclatures such as New Journalism, Docufiction, investigative reportage, critical theory, political theater, Developmental Sociology, and so on. As Davies (1976; 60) remarks,

It is possible in this kind of communications analysis to deal serially with such issues as the rise of the novel, the influence of mechanization on art and architecture, the effect of print, or the impact of radio on a non-industrial society. It is even possible--in more absurd moments--to correlate 'development' with the ideology of textbooks.

We are, in fact, confronted with two levels of interpretation when dealing with the match between the lived-world of our own reality and the mass media account of the social world of other persons. First, we realize that there is a structural similarity between the events of our lives and those re-presented in the media. Both can have serial presentation in the form of a linear causality of progression. That is, my memory of self can be constructed in the same manner as my expectations for a character in reading a novel. Second, we realize that such a structural similarity is embodied. The conscious experience that is our style of living in a world of other persons is forever reversible as a semiotic. The system of Self-Other-World is an incarnate logic which continually constitutes those expressions which are reversible with our original perceptions (Merleau-Ponty, 1962; 57). Eason (1977) offers us the neologism of metajournalism to describe the incarnate logic, the textual discourse, that a person lives in the conscious experience of mass communication in the Self-Other-World problematic. The term 'metajournalism' specifies the semiotic character of the so-called New Journalism movement in the United States during the late 1960's and early 1970's. As Eason notes,

The New Journalism, that form of reporting associated with the narrative strategies of the novel and the short story, takes its energy from an image-conscious society in which traditional

assumptions about manners and morals are breaking down. The writers find their stories in trends and events already transformed into spectacles by the mass media and use this image-world as a background for their interpretations. The central strategy of the New Journalism is to interpret public events as symbolic quests for significance by exploring the intentions, values and assumptions of those affected by the events. Stories of political changes, the emergence of subcultures, space travel, murders and executions all point to a common theme: the struggle for personal and group identity in a fragmenting society.³

Thus communal reality as a metajournalistic discourse presents both the truth of the existential choice in the news item as a semiotic artifact and the truth of the novel as another semiotic artifact within the phenomenological context of the possible as you and I can live it. Or as Merleau-Ponty (1964; 313) expresses his semiotic phenomenology with respect to news items, "True little incidents are not life's debris but signs, emblems, and appeals." "Yet there is more and less in the novel than there is in true little incidents. It foreshadows momentary speech and gesture, and comments on them." In these two genre perspectives, news item and novel, Merleau-Ponty indicates the poetry of truth hidden in the prose of discourse. This is to say, a person finds existential truths signified as emblems in the behavior of others, and signified as appeals in the narrative of mass communication. The two perspectives are not digital. We are not forced to choose one over the other in a futile Sartrean gesture of nothingness. Rather, the two views are the grasp of analogues. The views are not merely functional analogues of one another, but analogues of the person. News items and novels are not just examples of the serial structure of information, but human values coded and embodied as poetic communication (Marcus, 1974). News items as artifacts of consciousness and novels as artifacts of experience are both true to life because they are of life. In the phenomenology of the person, news items are emblems forming one boundary condition of interpersonal communication while novels are appeals forming the other boundary condition of social communication. Foucault

(1979; 285-292) demonstrates this concrete use of Merleau-Ponty's model of mass communication by showing its existence as a key factor in the emergent history of the prison. The truth of this interpersonally and socially bounded poetic communication, this conscious experience is what each of us lives in the reading of a great author or in listening to a famed orator. We sense not a choice between the objective and the subjective, news item and novel, but the combining force of discourse that commands the analogy of Self with Other in their World. Or a Merleau-Ponty (1962; 79) describes it, we are conscious of being-in-the-world (*être-au-monde*). The metajournalistic discourse as an analogy of life is more than the factual text. "The novel is truer, because it gives a totality, and because a lie can be created from details which are all true. The news item is truer because it wounds us and is not pretty to look at. They meet only in the greatest, who find, as has been said, the 'poetry of truth' (Merleau-Ponty, 1964; 311)."

TOM WICKER'S TIME

One of the greatest, one of the authors who finds the poetry of truth, is Wicker (1975). The poetry of his prose is his metajournalistic book A Time to Die. As the dust jacket of the volume declares to even the most casual reader: "A Time to Die is the gripping story of one of the most dramatic events in our time. It is simultaneously a unique venture in American self-examination." Wicker begins his story with a forthright description of his about to be shattered bourgeois personal life. He is having lunch in the executive dining room of the National Geographic Society, which is as he says, ". . . a few blocks from Lafayette Square and the White House." His lunch is interrupted by a telephone call: "'The most exciting thing,' his secretary said breathlessly, 'They want you to come to Attica' (Wicker, 1975; 4)." Wicker goes to the state prison in upstate New York. He goes as a reporter jerked out of his normal routine. He goes to get the facts of a riot. And he naively thinks, "And what was Attica or a prison riot to a political columnist? (p. 5)." He arrives and becomes more than a reporter. At the request of the inmates, he becomes an "observer." Yet, he emerges as a "negotiator" thrust into a political situation where his own moral values contribute to his living or dying in the midst of the rebellion.

The text which records Wicker's conscious experience is both a novel and a news item; it is more true than either one. The metajournalistic text codes a semiotic phenomenology in which the discourse is a sign (a news item) whose analogue is an emblem (a novel) whose analogue, in turn, is an appeal, i.e., the existential person who is Tom Wicker. For Wicker and for us, the produced text is the existential phenomenology of seeing which binds author and audience together in one semiotic movement of journalistic mass communication. "He who sees believes himself invisible: for him his acts remain in the flattering entourage of his intentions, and he deprives others of his alibi, reducing them to a few words, a few gestures (Merleau-Ponty, 1964; 311)." Wicker's few words, his existential gestures of seeing, are not invisible to him or us. They are made all the more existential in his visible use of the third person to narrate the Attica story. The semiotic discourse of the third person style allows us to see. Yet, the text is thereby an emblem for the existential witness. We see Wicker as he sees himself. In both perspectives we are privy to the first person narrator which is discourse per se. Such discourse is a sign of the third person form and the second person content.

Wicker's discourse is a reversible dialectic that can be characterized easily by suggesting the familiar movement of narration in terms of inter-locking paradigmatic and syntagmatic shifts. At one level, the text is autobiographical and paradigmatic. There is Wicker the New York Times reporter and there is the substitutable Tom Wicker (1975; 11); ". . . the youngest child of Delancy David Wicker, a railroad conductor of forbidding rectitude, and Esta Cameron Wicker, a woman of powerful personality from a proud Scotch family. . . ." The paradigmatic substitution of Wicker the adult and Wicker the child become the measure of personal judgment. Wicker reexamines his lived-experience when his consciousness of life is threatened by the context of death as he voluntarily and repeatedly enters D-Yard where the prisoners at Attica hold his life in their hands. Wicker is, for example, again confronted and tested by the politics of race. He is a liberal white Southerner whose very existence invites inmate threats. As a child, he grows up in a family whose politics and moral views invite the challenge of white society in Hamlet, North Carolina. As an adult in D-Yard, he is part of the "political theater" in which he and the other "observers" represent the failure

of white America to the mostly black and Puerto Rican inmates of Attica (Wicker, 1975; 39 and 76).

At a second level, the text is historical and syntagmatic. The discourse of the book is an account in fifteen chapters of six days. The six days it takes to move from the broken bolt on a hallway door to inmate rebellion to the death of forty-three persons. Yet, these six days are simultaneously the durée of the forty-five years of Wicker's life. From September 8th until September 13th, 1971, Wicker relives all that he holds sacred about himself, other human beings, and the world that matters to both. Picture yourself as Wicker did on September 12th, 1971 when negotiations are at a stand still, when the New York State police and National Guard are poised to attack the rebelling inmates, when the inmates are close to executing their hostages. Picture Wicker when the inmates demand that he come alone to talk yet one more time. Listen to Wicker's (1975; 211) description of existential crisis.

That could mean his life, either as an executed hostage or as an accident victim of a general attack when the troopers finally did come over the wall. There was no moral or any other kind of law or situation that forced him to return to D-Yard in such circumstances, particularly when it was not clear that anything would be achieved by it. He had faithfully done everything asked of him already; surely that was enough.

On the other hand . . . he knew . . . he must either finally meet his own expectations for himself or abandon them and his idea of who and what he was.

As Merleau-Ponty (1964; 313) instructs us, and as Wicker witnesses in his metajournalistic writing, "The novel gives the context. The news item on the contrary strikes us because it is a life's invasion of those who were unaware of it. The news item calls things by their name; the novel names them only through what the characters perceive." Indeed, Wicker's A Time to Die is for us the novel made news item and for Wicker the news item made novel--with

all the good ambiguity that these rhetorical combinations entail. The metajournalistic genre is, thus, not the paradox of news item and novel. Nor is it the confusion of factual reporting with editorial page comment. It is not the corruption of prose by fiction. Metajournalism is, in Merleau-Ponty's phrase, the poetry of truth. It is the ambiguity of discourse that authenticates the communality of the person.

NOTES:

1. "The superintendent also was uneasy about 30 inmates who had taken part in an abortive riot at the Auburn Correctional Facility in 1970, and who had been transferred later to Attica (Wicker, 1975; 7)."
2. I have in mind the critical theory view of communality that "Only communicative ethics guarantees the generality of admissible norms and the autonomy of acting subjects solely through the discursive redeemability of the validity claims with which norms appear. (Habermas, 1975; 89)."
3. David L. Eason, "New Journalism and the Image-World: Two Modes of Organizing Experience," unpublished manuscript, p.1. Available from the author: Department of Mass Communication, University of Wisconsin, Milwaukee, WI 53201.

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"WORLDLINESS" AND THE ANALYTIC TRUTH

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The distinction between the analytic and synthetic has been critically examined in the past, most notably by Quine. The relevance of our place in the world system, and our resultant subjectivity when discussing distinctions of veracity has received only passing mention. In this paper I will show that because we are part of the world, there are implicit limits on how we view the world. We are necessarily unable to define those "limiting factors" which inform both our analytic and synthetic definitions and their resultant body of knowledge. The blurring thus produced in the analytic/synthetic distinction will also be explored.

In Western civilization, man has historically found ways to place himself apart from the rest of the world. We generally think of ourselves as observers or manipulators, rather than participants in the world. Depending on the era, man's "apartness" has been seen as a function of, variously, possession of a soul, capacity for reasoning, ultimate ascension to heaven, or having God-given dominion over the animal world.

An example of this assumption can be found in any discussion of ecology. Whether one argues that technological man is ravaging the environment, or merely exercising his right of domain, the assumption is that man is interfering or manipulating. Man is not seen as having a rightful place in the ecosystem, nor does he "fit" in the ecological chain.

A corollary to this assumption is that man, given his

rational prowess, is capable of reasoning objectively about the world. He is not totally a part of the world, and therefore can see beyond the world system. Man is capable of analytic thought; he can construct formal systems which do not necessarily relate to or depend upon this world.

I argue, instead, that man, by definition, is incapable of objective thought. We are, indeed, part of the world. It is perhaps true that our reasoning abilities set us apart in somewhat the same way that a skunk is set apart by virtue of his unpleasant odor. The skunk, if he too were capable of reasoning, might wonder if he had a place in the world. Whether or not he could decide where he fit, we would nonetheless consider him a mere part of the world system. His capability to question his place would not of itself prove him "apart" from the world.

We are capable of observing how other parts of the world exist, and relate to one another. We may speculate and experiment on various aspects of the world. But all such speculation and experimentation are done from within the system. Because we who make the experiment or supposition are contained in the same model as the experiment, we cannot be objective.

There are two aspects to this lack of objectivity. The more trivial of the two is that any conclusion reached in any empirical proof may be affected by our interaction in the experiment. The mere presence of the scientist may affect the outcome. In any scientific observation, man's capacity to contaminate the results either by the way the experiment is designed or by his presence, has long been recognized. The scientist is generally not indifferent to the outcome of the experiment because a grant, tenure or money is at stake, which adds to the difficulty of achieving objectivity. The partial solution has been to isolate the experiment as much as possible from involvement of the scientist, and to maintain precise controls.

The more interesting limit on objectivity is a condition of our existence. A helpful approach may be to look at an analogous situation. Benjamin Whorf did extensive work on the relationship between language structure and the way the language user perceived reality. In "An American Indian Model of the Universe", Whorf discussed the Hopi perception of the Universe--most notably, their lack of words for the

concepts of time and space. He discussed how their metaphysics and view of the universe differ from ours given their lack of those concepts which we hold to be basic.¹ Because Whorf was outside the group which he studied (that is, he was unaffected by the cultural, ethnic and environmental factors which to some extent defined the group) he claimed to be able to describe the group's "world view" and show some of the linguistic sources for that "world view." He could state what factors limited this view of the universe. It should be understood that "limited" is not here being used in a derogatory sense; that is, no value is being placed on one version of "world view" over the others. But because he was an outsider, Whorf said he was able to see which factors defined and qualified the Hopi view in a way which a Hopi couldn't have done--assuming the Hopi was not a student of comparative linguistics or familiar with alternate conceptual schemes.

Because we are within the world which we attempt to describe, we cannot see what factors, if any, limit and define our way of looking at the world. Whether or not we agree with Whorf's thesis that language determines world view, the analogy of standing outside a system to look at it is useful. We are able to note that there may be limits; this ability is a result of our reasoning power. But this does not give us any means of learning what those limits might be. We can't even know that there are limits, we only know that there might be. We have no way of getting outside the system to analyze those physical, "worldly" factors which are the counterparts to a group's cultural, environmental or ethnic limiters.

In the most obvious sense, we can only deal with the world in a given way. There are clearly pragmatic limitations required for survival. If, for example, one jumps from a high building in an attempt to see gravity in a new light, he will be hard hit by these limits. It is within our realm to recognize these obvious physical limits. However, we are unable to think about the world in any ways except those by which we are defined. We are limited implicitly, so that we cannot know how or by what, or even if we are limited.

Suppose that one is having a discussion of whether cause-effect is in the world, or is merely a function of our seeing. By seeing I mean, inclusively, our reasoning ability and the way we deal practically with the world as well as

actual optical vision. Recognizing that we are part of the world renders our discussion trivial. Our "seeing" is itself a part of the world; cause and effect, if we can define them, are therefore in the world, whether through our vision or through what we would call "actual" innate causal connections. The world remains causal at least as long as we, who deal with the world causally, are involved in it. We may be the link between cause and effect and the rest of the world (if cause-effect is a function of our vision.) We have, then, shaped the world only insofar as we are shaped and defined by our own "worldliness."

This does not mean that we cannot think of the world in other than causal terms, at least on a theoretical level. We think whatever we want to, within those unrecognizable limits. If we knew what it was that we are unable to think, then of course we could think it.

What does this necessary subjectivity have to do with the analytic/synthetic distinction? This distinction has been used, throughout history, to build an empirical "world view." Some analytic construct, a formal structure which is necessarily true, is used as the basis for building up a coherent picture of the world.

In order to fully appreciate the impact of losing the analytic/synthetic distinction, one should understand what is meant by analytic and synthetic, and how the distinction is used. This distinction has been drawn by various philosophers, albeit not always in the same terminology. Quine, in preparation for his argument against the distinction in "Two Dogmas of Empiricism," defines the analytic as "grounded in meanings independently of matters of fact" and the synthetic as "grounded in fact."² Kant considered a statement analytic if it was true by virtue of its meaning without any recourse to facts. To Leibniz we owe the expression "true in all possible worlds" as a definition of the analytic. It is generally held, in the traditional philosophic viewpoint, that formal systems, whether of logic or mathematics, are derived from analytic truths, although how much of such systems are analytic is not a matter of agreement. Many formal systems appear to be isomorphic with some facet of reality, which may have helped to confuse the issue. One example of this is Euclidean geometry; although this formal system has been superseded theoretically by non-Euclidean geometry,

Euclidean geometry still satisfactorily shadows the scope of the world as the lay person typically perceives it.

But even if a formal system appears to be a map of some actual relationship in the world, the basis of, or assumptions of such a system are generally considered to be incontrovertible. The meaning of the formal system is contained within itself. There is no reliance on the outside world. For this reason, such structures have been very useful in building scientific theories because they present a firm foundation upon which to balance recorded empirical facts. The scientist needs this analytic structure, from outside his model, to defend his model.

Quine attacks the analytic/synthetic distinction in "Two Dogmas of Empiricism." One of the points upon which he attacks the distinction is that we cannot even define our terms (i.e. "definition," "explication," "synonym") without recourse to the very distinction we wish to draw. For example, synonymy cannot be defined except in terms of what we mean in an empirical sense by synonymy.³ I wish to make clear that this is not the sort of point I am making. Any limits on analytic thought which can be pointed out and described (as Quine has done in his discussion of words which require empirical knowledge to be defined) are automatically "thinkable" and "within our imaginative scope," and therefore do not meet the criteria for being part of our inherent limits. For, if we could see the limits, we would be outside the system.

Logical and mathematical systems which appear not to rely on empirical knowledge are a necessary beginning for any empirical proof or reasoning. When a scientist says, "If this is true, then this other thing is true" he is depending on the syllogistic construct to prove his point. The scientist must have an inviolable pattern (i.e. one not dependent on the world) upon which he can place his theory; if the theory "matches up" to the logical construct, then he can say that it is proven.

We have already discussed various terminology for defining the analytic. To avoid confusion, all future references to analytic are to that formulation, "true in all possible worlds."

Various writers have discussed the kinds of possible worlds we can imagine. It seems clear that we can imagine worlds in which the laws of nature can be broken, but can we imagine worlds in which the laws of logic can be broken? I submit that we can imagine worlds with alternate logics, or at least we can imagine imagining them. This gives us the ability to imagine, for example, a world in which circles are square. Given a different basic analytic construct, such a supposition would not be a contradiction. Before Einsteinian physics, after all, we could not have dreamed of a curving straight line. But we still don't know what, or even what kind of worlds we cannot imagine.

The concept of "possible worlds" is limited to those worlds which we can imagine. Our collective imagination defines the scope of "possible." Can we imagine an impossible world? One might say, "Yes, a world in which 'green echo' makes sense." But, given an alternate conceptual scheme (where the light wave of green could, in a space warp, echo itself elsewhere), this may be a possible or even existent world. Since we can't demarcate possible worlds, what we mean is "true in all worlds which are possible to us," or "true in all the worlds we can imagine."

Since historically it has seemed vital to assure incontrovertible truth as the foundation for an empirical world view, this appears to destroy our means of dealing with the world. However, according to Quine, whether or not we merely rearrange some other "matters of fact" or totally restructure the "interior field" of our scientific framework is only a matter of degree.⁴ The shift from Newtonian physics to Einsteinian, to Quine, is no different a shift than determining that a virus rather than a bacteria causes some given disease. Any statement can be revised; if drastic structural changes in our scientific viewpoint are required, then the choice can be made whether this drastic restructuring creates a more cohesive whole than would merely rearranging some peripheral views.

Quine points out, however, that the choice "turns upon our vaguely pragmatic inclination to adjust one strand of the fabric of science rather than another in accommodating some particular recalcitrant experience. Conservatism figures in such choices, and so does the quest for simplicity."⁵ In other words, unless there is dramatic evidence, in quantity

or importance for changing some basic tenet of our whole "world view" then it is more practical to rearrange and accommodate that evidence on the periphery.

Throughout history, men have agonized over ways to fit things into the existing framework before reluctantly accepting some new framework which more expediently accommodated the new facts. A good deal of hostility has typically been shown a new framework before it is eventually adopted. One might say that the analytic/synthetic distinction has been used repressively in the past. Men have clung to an outdated theoretical structure on the basis of its "irrefutable" logic.

It has been an extraordinarily useful tool as well. Even if one rejects the distinction per se, he must recognize its power in building a framework of thought. One must have a solid basis, at least temporarily assured-to-be irrefutable from which to collect and connect empirical data. Putnam has addressed the problem in "It Ain't Necessarily So." As Putnam points out, "The distinction between statements necessary relative to a body of knowledge and statements contingent relative to that body of knowledge is an important methodological distinction and should not be jettisoned."⁶ Putnam recognized the importance of maintaining some systematic body of knowledge on which to base our scientific viewpoint. One goes along, fitting information together logically, basing those logical connections upon some basic theory. It doesn't make much sense to fit these facts together unless there is some strong foundation underneath that lends method to the connections. When, historically, more and more facts were uncovered that did not easily fit into the current theory, a new theory was presented. Generally, the old theory had had many "after the fact" revisions stuck on it in an uneasy attempt to fit all the facts together, before a new and more explanatory theory came along. No basic theory, however, disintegrates in the face of one or even many facts or experiments which are not easily accommodated. It is only when some new and superior idea is launched and tested that the old theory is discarded. It is important not to reject an old framework, patched up as it might be, before a new one comes along. We require a basic conceptual scheme.

In the Grice/Strawson article, "In Defense of a Dogma," it is pointed out that regardless of whether analyticity can

be adequately explained, and regardless of the cases of statements unidentifiable as either analytic or synthetic, we do assume and use the analytic/synthetic distinction.⁷ Not only is there use of the distinction, as Quine himself uses it in his argument against it, but there is general agreement on those statements which fall into either one class or the other. Whether explicable or not, then, the usefulness of such a distinction is shown by our use of the distinction.

We have discussed the usefulness of this distinction in building a scientific framework. While there may be many statements within our whole view of the world which are not clearly analytic or synthetic, we construct our basic theory on analytic grounds. We employ those statements "necessary relevant to the appropriate body of knowledge"⁸ as building blocks. These building blocks cannot be defined as "true in all possible worlds" because we are incapable of making such a remark.

We attempt to define a world system of which we are part. We are defining ourselves along with the rest of the world when we make our observations. Because we are of the world we cannot, from outside the world system, view the basic tenets implicit in our "worldliness." However, we do preserve the capability of building basic scientific theories upon which to rest our accumulation of empirical knowledge. We can construct such principles, knowing as we do that we are employing a distinction between kinds of knowledge. Having recognized that our analytic powers are limited, we can still take advantage of a useful distinction, employing it methodologically in the world. The definition of the distinction has been shaky, but the distinction itself still exists and is useful.

NOTES

1. B.L. Whorf, 1956, An American Indian Model of the Universe, in "Language, Thought, and Reality," ed. by J.B. Carroll, M.I.T. Press, Cambridge, pp. 57-64.
- . W.O. Quine, 1953, Two Dogmas of Empiricism, in "From a Logical Point of View," Harvard University Press, Cambridge, p.20.
3. Ibid., pp. 25-31.
4. Ibid., pp. 43-46.

5. Ibid., p. 46.
6. H. Putman, 1962, It Ain't Necessarily So, The Journal of Philosophy, LIX, No. 22, p. 671.
7. H.P. Grice and P.F. Strawson, 1956, In Defense of a Dogma, The Philosophical Review, LXV, No. 2, pp. 141-158.
8. Putman, It Ain't Necessarily So, p. 671.

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THE RHEME/DICENT/ARGUMENT DISTINCTION

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I will be concerned here with an important distinction of sign-type which has yet to be used effectively in applied semiotic, as far as I know: the Peircean distinction between a rheme, a dicent, and an argument (in a generalized sense of this word). The kind of application this distinction has is clearest to me in the case of the critical analysis of artistic texts (verbal, visual, acoustical, or whatever), particularly literary texts, so I will focus upon this sort of application here, though with hope that the reader can derive from what I say an intuitive sense for its more general import and use.

This distinction originates as a generalization of the logician's distinction of propositional function/proposition/argument, which is in turn a reconceiving of the traditional distinction of term/proposition/argument. (1) A propositional function is something which would be a proposition if it were not devoid of at least one of the signifying elements that would have to be present were it to indicate its reference sufficiently to enable it to be assessed in terms of its truth-value; (2) a proposition is a sign which both signifies some characteristic(s) of an object and contains signifying elements which indicate its reference sufficiently to enable it to be assessed for truth-value; and (3) an argument is a proposition put forth as true on the bases of another proposition (or set of propositions regarded as a single compound proposition) unconditionally put forth as true. For example, 'x loves Mary' or 'x loves y' or 'John loves y' (or 'x is red' or 'x gives y to z') are propositional functions. Letters such as 'x' and 'y' are usually referred to by logicians

as "variables," and may be thought of notationally as being like blanks to be filled in. 'John loves Mary' or 'Someone loves someone' or 'Everyone loves someone'--and there are still other possible variations--would all be regarded as complete propositions. (The so-called "quantifying" words 'someone' and 'everyone' are regarded as completing the referential signification sufficiently for the logician's purposes. For example, 'Someone loves Mary' is understood to mean 'There is something, x [in a certain assumed universe of discourse], such that x loves Mary'. 'Everyone' is construed as meaning that any given thing in the assumed universe of discourse loves Mary. Thus referential signification is being made in quantified propositions in a way in which it is not in the case of functions.) 'John loves Mary, as is obvious from the benevolent attention he is constantly paying her' would be an argument since 'John loves Mary' is being regarded as put forth on the basis of 'John is constantly paying benevolent attention to Mary'.

The introduction into logic of the idea of a propositional function in place of the traditional idea of a term, which was achieved independently by Gottlob Frege and Peirce at about the same time,¹ was one of the most important moves in the founding of modern logic: first, because it made it possible to treat propositions with relational predicates (such as 'loves', 'gives', 'hits', and so on) on a par with propositions with non-relational predicates (i.e. those which qualify a single subject, such as 'red', 'mortal', and so on) and to develop a uniform and perspicuous method for representing propositions generally; second, because it showed that the copula word 'is' is not an independent logical factor but merely a grammatical feature of (some) natural languages and therefore eliminable in logical representation; and, third, because--as Peirce conceived it (for this way of understanding the matter cannot be imputed to logicians generally)--it made the traditional distinction between a term and a proposition reconceivable as a distinction in degree between a proposition with a referential signifier which is so extremely indeterminate as to be treatable as if non-existent for analytic purposes and a proposition all of whose referential signifiers are sufficiently determinate to warrant treating it as a complete proposition. (In Peirce's view, all actually occurring signs are indeterminate to some degree, which in the case of referential signifiers means that the interpreter of the proposition must always make a logical "leap" in identifying the referent--though this "leap" will often be so

minimal as to be unworthy of being taken into account.) In other words, the so-called "variables" which occur in the representation of propositional functions, though regardable notationally simply as blanks to be filled in by signs performing the function of identifying the objects to which the predicate is being referred, are regarded substantively as attenuated instances of signs which would be performing a distinct referential function if they were not regarded as being so extremely indeterminate that they must be treated in an analysis as having no referential force at all.² Peirce then simplified still further by regarding complete propositions as standing to arguments somewhat as propositional functions stand to propositions: thus, for certain purposes, one could regard 'John loves Mary' as contextually expressing something like 'John, who is constantly paying benevolent attention to Mary, must love Mary', which can be regarded as equivalent to an argument whose premise is that John is constantly paying benevolent attention to Mary and whose conclusion is that John loves Mary. The plausibility of this depends upon acknowledging that no sign dictates self-evidently how it is to be represented in the logical evaluation of it. (Logicians are in the habit of talking as if the propositions which someone is analyzing for logical purposes are simply given--self-evidently--by the actual words put forth by someone, a misleading habit which is doubtless encouraged by the practice of writing logic textbooks with artificial examples that students can assess without involvement in any real evaluational enterprise.) This is not to suggest that there are no problems involved in Peirce's way of regarding these matters--there are, particularly as regards the relation between assertionality and referentiality, for example--but we will ignore these for our purposes here, the relevant point being simply that Peirce had a way of regarding propositional functions, propositions, and arguments such that the distinction between them can effectively be made in a given analytic situation without thereby being thought of as corresponding to an absolute distinction in the entities being represented when the latter are regarded in the abstract.

Turning now to the general semiotic distinction of rheme/dicent/argument, a rheme is any sign whose semiotic identity does not limit what its interpretant can refer to as its object except, of course, to being something which the sign itself could have as object. (I do not define the rheme simply by generalizing from the foregoing definition

of a function because it is important from a semiotic point of view to understand things in terms of sign-interpretant relations, but reflection upon the semiotic import of that definition and upon the examples to be discussed should make it reasonably clear that the one is a semiotically generalized version of the other.) For example, in the special case of a propositional function--'x loves Mary', let us say--the object referred to by any interpretant of it must be a lover loving a beloved, but there is no further a priori restriction except insofar as the component sign 'Mary' partially identifies the object further. However, the indeterminateness of 'x' makes the determinateness of 'Mary' more apparent than real, for a reason to be explained shortly. For the moment let it suffice that a sign is fully rhematic in virtue of the presence in it of even a single unbound variable (indeterminate referring sign).

As an example of a rheme which a logician obviously would not regard as a propositional function take the character Hamlet in Shakespeare's play. (We could take as an example the entire sequence of events in that play--the play itself, as distinct from the playscript--but the example may be clearer if we take Hamlet only.) Semiotically regarded, Hamlet--I mean the fictitious person--is (among other things) an iconic sign of anything which is like it, including itself.³ Thus we can regard Hamlet as representative of, say, "modern Western man" (to take a familiar sort of interpretation), supposing we have some basis for saying that modern Western man really is like that. (Whether modern Western man is itself a fiction having the same ontological status as Hamlet or whether it has a reality of a sort that makes the word 'fiction' inappropriate to it is another matter, but we should not be too hasty in imputing simple fictionality to such abstractions.) Or we could pick out some individual with whom we are acquainted and say that he or she is a Hamlet (i.e. is Hamlet--does not differ from Hamlet--in contextually relevant respects), thereby recognizing a Hamlet-like representation of that person--which is to say, that person as represented--as an interpretant of Hamlet.

But were we to interpret the play as a history instead (as someone might naively take the so-called "historical" plays of Shakespeare) we could not do this because, regarded as historical, the character Hamlet is not a rheme but an iconic dicent sign whose referent would be a certain Dane who supposedly lived in a certain place at a certain time,

and who therefore could not be identified either with an abstraction like "modern Western man" or with some other concrete individual. Of course, we do in fact take historical individuals (as represented) as iconic representatives of abstractions and of other individuals, so the question is, how are we to understand this semiotically? The answer is that in doing so we implicitly dehistoricize them: fictionalize them, in effect. We choose to regard them rhematically. (To do so is not to deny the historicity of the represented individuals but only to ignore it.) That there is an implicit dehistoricizing involved when a historical figure is taken as representative in the way indicated--and that this is not merely a quirk involved in the semiotic way of construing things--is shown by the following considerations. During World War II a certain Vidkun Quisling became a paradigmatic exemplar of a certain kind of traitorous activity, so that it was quite common for several years for people to say of other persons they supposed to be traitors of that kind 'He's a Quisling'. Now it is possible--however implausible it may be--that the historical Quisling was in fact a misunderstood patriot, both in intention and in the effects of his actions. Suppose this were demonstrated beyond any reasonable doubt. Would we then have to conclude that when people said of someone 'He's a Quisling' they were really saying that he is a patriot? Clearly not. It follows, therefore, that 'He's a Quisling' never did mean that the person referred to was just like the historical Quisling (since that would have made such assertions contingent in meaning upon the facts about Quisling) but meant rather that the person is just like a certain widely received idea--representation--of Quisling. In other words, by the very fact of becoming paradigmatic, the historical Quisling (as represented) became dehistoricized. This is only a shorthand way of stating the matter, though. To be more exact: an icon became distinguished from its object at that point; that is, the historical Quisling and a certain idea of Quisling, previously undistinguished from one another, became distinguished. The detached icon--a rheme which had previously been an iconic dicent sign--was then semiotically available for the representation of whatever it was fit to represent. (This, too, is only a shorthand account, needless to say, but I cannot attempt to explain the point more rigorously here.) One upshot of this is that treating them as rhematic, though perhaps it is as simple as that--can be seen to be the via regia to all experience and use of the possible as such,

with all that this implies about the nature of human understanding. And if this is correct it also supports--or perhaps I should say that it is supported by--the intuition which I suspect we all have (unless we have been seduced by the currently fashionable esthetic hedonism) that the creative arts are somehow logically foundational in all intellectual development.

But let us return to the point made earlier that a rheme (propositional function) such as 'x loves Mary' is no less rhematic than 'x loves y', notwithstanding the fact that the apparent determinateness of the sign 'Mary' would seem to make the former more determinate than the latter. The reason for this can be brought out by considering a case of the following sort. Suppose we have an anonymous narrative⁴ in which someone identified only by the sign 'A' is said to have had an impassioned love affair with someone identified referentially by the sign 'Richard Nixon', and let us suppose further that the latter is characterized in other signs in the narrative in such a way that only the recent president of the U. S. of that name could possibly be the referent of that sign--if there actually is a determinate reference. Now, anyone who has wasted time on the morbid hobby of trying to ascertain what "the real Nixon" is like would realize how preposterous it is, on the face of it, to suppose that this obsessionally political man might have had an impassioned love affair with anyone in his later life. (It is not impossible, of course, but just so highly implausible as to be dismissable prima facie. This is the reason I use the example: time does not permit me to develop a more obvious one here.) Hence we would probably categorize such a narrative as fictional or non-historical, if it seemed to us to have any value at all. Would we do this on the ground that it is false that he had such an affair? No. For if the presence of a falsehood in a putatively historical text were to preclude it actually being a history we would have precious few historical texts of substantial length, if any. (That is, our categorization of a text as a history as opposed say, to its being a novel cannot be supposed to be based on the assumption that it contains no falsehood inasmuch as the category of the historical would then be virtually useless in practice.) The reason we would refuse to categorize it as an historical text would be its preposterousness prima facie: such a narrative would lay little claim to our interest in it as a history. Hence, insofar as we wanted to find something valuable in it, we would categorize it in such a way that

standards of assessment of it could be brought to bear which would encourage a reading of the text that would enable us to recognize whatever was of value in it. The immediate point is that the refusal to recognize the narrative as historical would be a decision not to recognize the apparently referential signifier 'A' as really functioning to signify anyone, not even in the devious way in which pseudonyms referentially signify. That is, we would construe 'A' not as equivalent to 'someone who could be but will not be here identified' (which would mean that 'A had an impassioned love affair with Richard Nixon' was a proposition or, more generally, a dicent sign) but rather as an unbound variable, without real referential force. And this would mean in turn that the sign 'Richard Nixon' has no referential value either. For if one member of a pair having a love affair is a fiction then so also is the other one, necessarily.⁵ This is why--to take our earlier example--'x loves Mary' really says no more than 'x loves y'.

Generally, then, the presence of one unbound variable in a rheme has the logical effect of making any other apparently determinate referential signifiers in that rheme equally indeterminate. Moreover, the referential value of all other referential signs in that same narrative which cross-refer back to such a rheme are ipso facto rendered nugatory in substantive referential value as well. Thus, suppose our narrative reads: 'A had an impassioned love affair with Richard Nixon. He especially enjoyed going to rock concerts with her, wearing his hippy outfit.' The signs 'he' and 'her' function to deter reference to the first sentence; but since the first sentence has no real referential signifiers, the cross-referring signs in the second sentence--and in all other sentences in the narrative that cross-refer similarly--have no real referential signification. The objection to this would be that the cross-referring signs in the rest of the narrative clearly do have some referential value or else we could not speak of them as cross-referring. This must be granted, at least to the extent of acknowledging that cross-reference of this sort needs to be explained to our satisfaction (which I cannot attempt here); but even after cross-referentiality is explicated I think it will still be legitimate to say (speaking loosely, of course) that it is an illusory sort of referential signification since the non-referentiality of the unbound variables in the rheme in question is bound to make the cross-referentiality ultimately vacuous as referentiality

in some way. Supposing this is correct, what it suggests to me is that to regard a text as fictional is to regard it as rhematic as a whole, which in turn implies that even the individual cross-referring signs, which would appear to be propositional or dicental in character, are really themselves only rhemes, i.e. their propositional character is as illusory as their referentiality. Thus the 'her' and 'he' in 'He especially enjoyed going to rock concerts with her' apparently refer to what 'A' and 'Richard Nixon' refer to, respectively. But 'A' and 'Richard Nixon' don't refer at all. How, then, can we say that 'her' and 'he' refer at all (except in whatever way or sense we would give in explicating cross-referentiality)? But now, if even the apparent propositions are really rhemes then no restriction is placed on what the referents of the interpretants of each of them can be other than what their predicates can apply to, which is as diverse as the predicates themselves. In other words, a fictional narrative as such seems to "fall apart" logically, as it were, precisely in virtue of being treated as fictional.

Instead of being a reductio ad absurdum of this way of analyzing these matters, as it might seem at first, I think this is actually a strong point in its favor. For it makes it possible for us to understand semiotically a peculiar thing about fictional works, namely, that although they may have a formal referential structure such that they could be historical or reportive they also may be such that it is quite impossible in principle to construe them that way because if one tried to do so they would become formally incoherent, and this may be a virtue rather than a defect in them. An example that happens to come immediately to mind is Gabriel García Márquez' The Autumn of the Patriarch (El Otoño del Patriarca) in which the first and third person personal pronouns, functioning as cross-referring signifiers, frequently occur with unresolvably ambiguous signification (usually bi-valent) in contexts which at times leave it to the reader to choose which fictional person is being referred to but at other times positively compel one to accept both at once even though the result is that supposedly distinct persons thereby become identified. (E. L. Doctorow's Loon Lake uses a somewhat similar technique, and there are numerous other examples in recent literature.) Profound philosophical questions about the nature of personal identity and difference are thereby effectively raised, and in a more forceful and aporetic--though less articulate--way than they would be raised in a philosophical essay. This particular literary

technique is intelligible semiotically if we understand that treating a work as a fiction involves--semiotically, not psychologically⁶--regarding the text ab initio as a conjunction of rhemes which have only a prospective mutual coherence in the sense that our initial interpretational strategy, as readers who wish to make the best of what the text may have to offer, will be to treat the intratextual cross-references in the same way we do in the case of a text which is treated as a history or report, all cross-referential ambiguities being resolved in favor of the development of a unitary interpretant text with unambiguous cross-referencing throughout. (I distinguish the "raw" text or text as sign from the interpretant-text(s) which are created in the process of interpretation.) That is, we will treat it not as a history but as if it were a history. But only tentatively, for this is only an initial heuristic strategy which we will be prepared to abandon at any point at which the raw text becomes resistant to what I will call a "common sense quasi-historical" reading: if not absolutely resistant then at least sufficiently resistant for it to seem likely that it will be more profitable either to start developing divergent but equally valid interpretant-texts at that point (which may or may not be mutually compatible and which may or may not subsequently converge into a unitary interpretant-text) or else to abandon some part of our common sense assumptions--assumptions we would not be willing to abandon if we were reading the text as a history--about the identity or distinctness of a person, event, or thing in order to maintain referential continuity at the expense of entertaining unorthodox metaphysical possibilities. (This is intended only as a suggestive but obviously incomplete account of the way in which a text which is unconventional in its cross-referential dimension can compel or encourage imaginative heuristic strategies which are appropriate precisely because the text is categorized as fictional. There are, of course, many other sorts of devices a writer can use in producing a "raw" text--bear in mind that I don't mean a rough draft but rather the final product of the writer as such--which will necessitate or encourage unconventional constructions of interpretant texts (readings) from it.)

The time remaining does not permit further exploration of the concept of the rheme and its uses or more than a few brief comments on the dicent and the argument. A dicent (or dicisign) is of course a sign whose semiotic identity

limits its interpretant's reference by including in itself only determinate referential signs, i.e. it contains no unbound referential variables or any analogues to such signs. (I suggest that 'dicent' and 'dicensign' are most felicitously pronounced with the Italian or Church Latin 'c'.) An argument (or *delome*) is an internally complex sign composed of an interpretant-dicent and the dicent of which it is an interpretant. (Because in its generalized sense the word 'argument' is used far beyond the limits logicians would countenance, the neologism 'delome' would perhaps be better; but I stay with 'argument' because there is a traditional use of this word that is much broader than the logician's use--as when we speak of the argument of a literary work, for example--and because I believe the two senses are more intimately related than might appear at first.) The relation of these formulations both to the preceding formulations of 'rheme' and to the earlier formulations of 'proposition' and 'argument' (in the narrower sense) should be obvious enough upon reflection. (These are my formulations and not more or less verbatim versions of Peirce's. But I regard them as expressing his conceptions as viewed from a special perspective, not as involving any essential modification in the conceptions themselves.)⁷

Since a rheme is simply an incomplete dicent the conception of the latter need not be further commented upon here, though as regards its use I should remark that although it is primarily to be understood as a sign referential of what is actually so (in contrast with the rheme as presentative of a mere possibility), this means actually so in some possible world. What we commonsensically think of as being "the real world" or "historical world order" is, of course, a possible world, but then there are innumerable many other possible worlds as well. Any rheme defines in part some possible world, and within such a world or part of a world--a world that is fictional just insofar as rhematically regarded--dicents can occur. This means that a narration regarded as fictional (rhematic) provides a frame within which dicental signs may occur, which means in turn that we must distinguish conceptually the fictional narrative from that which is narrated, which may--and usually does, in the case of literature--include dicental occurrences. For example, on our pseudo-Nixon narrative above we might find the pseudo-Nixon saying passionately 'I love you madly! I'll forsake my political career and we'll live happily ever after as beachcombers in Tahiti!'. This is not an element

of the fictional narrative proper but rather a dicental occurrence within the possible--though, of course, wildly implausible--world semiotically constituted by the narrative. (The narrative element would be "Nixon said 'I love you madly! I'll forsake my political career and we'll live happily ever after as beachcombers in Tahiti!'".)

As regards arguments (in the generalized semiotic sense), they are constituted by any set of dicents one of whose members can be construed as an interpretant of the other(s). Now, any consequential narrative can be regarded as an argument in the broad sense, meaning by 'consequential narrative' one in which a part thereof is reasonably construable as more or less necessitated or at least made somewhat fitting or plausible by the rest. Thus, for example, the fated results of the classical hero's "tragic flaw" is the interpretant of the behavioral manifestations of the tragic flaw itself in the fictional circumstances within which they occur. And, in general, any part of a narrative--or of that which is narrated (for it is not only words that are signs: the phenomenal entities which words introduce are also treatable as signs)--which is necessitated or made likely or plausible by the rest of it can be construed as an interpretant of the rest of it, the narrative (or that which is narrated) as a whole being the argument: any plausibly compelled denouement, resolution, character change, achievement of insight, etc., taken together with what plausibly compels it, is an argument. But it is not enough that the author has put forth the narrative as consequentially developed. In representing a fiction semiotically for purposes of critical assessment, we are not required to agree with the pretensions of the text or with any collateral authorial claim (any more than we are obliged to categorize it at face value). If we were we could not assess it. Our obligation--which stems simply from our presumed desire to make the best of things--is only to see to what extent it really is worthwhile to regard it as an argument. If it purports but fails to be such, or if it is far weaker in this respect than it should be to be of any real interest, then it is, of course, a failure to that extent. And it should be noted further that, in treating something as an argument, we must adopt the heuristic interpretational stance we take when we decide to treat a narrative as fictional to begin with (which, as I've suggested, is to regard it ab initio as a mere conjunction of rhemes with only a prospective coherence), namely, regarding it as if it were of the nature of a history

insofar as the text is amenable to this (in order to unify the text through cross-referentiality); for if the narrative is to be regarded as having an argument form, the parts of it must be regarded as having dicental form.

These are only hints, at most, of what is involved in the use of the conceptions of the dicent and the argument or delome, insufficient to convey anything about the use of them beyond what must be understood given what I have said about the use of the conception of the rheme. The only general point I can make about the trichotomic distinction by way of a conclusion here, as regards its application in literary criticism and theory, is that it is with it (or some similar distinction) that a semiotic analysis of the Peircean sort can begin to explore the kinds of critical problems which have been especially prominent in recent decades because of the increasing development and use of literary techniques which pose for both the reader and the critic problems about the status of fiction itself as such and its relation to knowledge and reality. As regards aesthetic criticism and theory in fields other than literature, those interested in the possible application of these ideas can perhaps extrapolate from the present paper to these other fields by looking for the analogues in those fields to regarding works as non-referential, as referential (i.e. "representational" in the non-technical sense of the word), and as consequential, implicatory, or argumentative. (It is quite possible, by the way, and probably desirable in a great many cases to regard one and the same work in two or all three of these ways, though one must stay clear on which way one is regarding the work at a given time.) As regards the use of the distinction in the understanding of those natural processes that are amenable to semiotic analysis (as distinct from its use in criticism), I doubt that I have said much here that would be suggestive for extrapolation in that direction, but the best bet would probably be to think in terms of the role of the conceptions of the possible, the actual (the existentially co-occurrent), and the consequential (in the causal sense of the word 'consequence') in understanding such subject-matters.

NOTES

1. Frege anticipated Peirce in print by four years on this (1879 vs. 1883), but it would be difficult to say who actually

made the discovery first. Peirce and Frege had no known influence on one another at any time.

2. One is more likely to be sympathetic to this way of regarding logical variables to the extent that one has tried to pin down precisely what formal logicians mean by the word 'variable' and the corresponding word 'constant', both of which have been borrowed from mathematics. (Writers of logic textbooks usually avoid explaining these conceptions by speaking of them simply as notational devices, consistent with their usual policy of avoiding discussion of anything philosophical--which is to say, avoiding anything of philosophical import.)

3. In another paper I have explained how, in the case of icons and iconic signs, self-representation--wherein sign and object are in a certain sense identical--becomes a possibility (On the epistemic function of iconicity in perception, Peirce Studies No. 1: 1979, pp. 51-66). Some of the things I say in the present paper assume this sort of qualified identity, and the reader should consult that paper before concluding that I confuse sign and object in certain places here.

4. Anonymous in order to avoid the issue of the role of authorial intention. I should think it obvious that an author's intentions have no constant semiotic role to play as regards the matter in question, but this is a vexed topic and, moreover, there are aspects of the problem of intentionality which would require discussion at some length. As regards the sign playing the role here assigned to "A", it could be something with the appearance of a proper name, or even the appearance of a quantifier, such as 'someone', 'a certain person', etc. But the identity of a sign is not to be taken at face value if there is any reason to question what its role really is.

5. Can't a real person fall in love with a mere fiction? Of course. But I'm talking here about a love affair, which implies a reciprocal interaction which cannot occur between something actual and something that is only a possibility.

6. There should be a possible psychological account that would correspond to the description of the process which is developed for critical purposes, but precisely what form that would take is another matter. The critical account can be profitably thought of as the description of the procedures involved in the technē (craft, art, skill) of interpretation, and as practiced by a master craftsman there will no doubt be many shortcuts in the actual interpretational process. In any case, though, the besetting sin of theory of criticism

of any sort is the confusing of an account of a critical procedure with the description of a psychological process. Critical theory has no logical dependence upon the findings of empirical psychology: the dependence runs in the other direction. (A lot of what passes for psychology, though, is really just critical theory in disguise. The disguise is necessary if the psychologist is to be successful in playing the combined role of spiritual advisor and scientist without embarrassing questions being raised about the source of his or her remarkable authority in contemporary life.)

7. As regards Peirce's own definitions, the set I prefer at present is the following, from a paper of 1903 ("Collected Papers," Vol. II, pars. 250-252).

- (1) rheme: a sign which, for its interpretant, is a sign of qualitative possibility, that is, is understood as representing such and such a kind of possible object. [Also]: a sign is understood to represent its objects in its characters merely.
- (2) dicent (dicisign): a sign which, for its interpretant, is a sign of actual existence. [Also]: necessarily involves, as a part of it, a rheme to describe the fact which it is interpreted as indicating. [Also]: a sign which is understood to represent its object in respect to actual existence.
- (3) argument (delome): a sign which, for its interpretant, is a sign of law. [Also]: a sign which is understood to represent its object in its [i.e. the object's] character as sign.

Peirce's definition of 'argument' may be initially puzzling, relative to my formulation here, but he is simply saying that an argument consists in a law-like relation between a sign and an interpretant of it. (The relation is analogous to a premise-conclusion relation. Or, more exactly, what a logician would recognize as a premise-conclusion relation is regarded by Peirce as a special sort of case of a sign-interpretant relation.) An argument is a sign at a higher logical level than the dicent signs which function as the interpreted and the interpretant signs: they function as its objects or relata. In the second part of the definition Peirce would seem to be speaking as if only the sign being interpreted is the argument's object, but he means the interpreted sign qua sign, which implicitly introduces its essential concomitant qua sign, namely, an interpretant of it.

THE SIGN STATUS OF SPECULAR REFLECTIONS

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What can more resemble my hand and be
in all points more like it than its
image in the looking glass? And yet
I could never fit such a hand into
the place of its original.

Immanuel Kant

Perhaps the mirrors in our houses will
be ever open doors for dreams . . .

Henri de Regnier

In his book, A Theory of Semiotics (1976), Eco has argued that the recognition of a relationship of similarity between the sign-vehicle and its signified content is necessarily dependent upon a rule (or rules) of "similarity". According to this argument, such rules serve to guide us in selecting, from among the many qualities that both a sign-vehicle and its content may possess, only those qualities that are properly to be compared. Thus, for example, the "blue" in the upper portion of a postcard landscape is capable of bringing the notion of "sky" before our minds only to the extent that we are able to isolate the quality of "blueness" from the other qualities equally possessed by the "postcard sky" and the sky as directly perceived, i.e., qualities such as material density, scale, shape, temperature, texture, weight and two-dimensionality, etc. Obviously, the patch of blue on the postcard "resembles" the sky

only in a very restricted sense. Eco's point is that the fact that this simultaneous isolation and correlation of blues appears to be quite automatic should not be allowed to hide from us the fact that it is accomplished on the basis of a network of largely implicit assumptions regarding the nature of postcard photographs and their relationship to objects of direct perception.

What is sometimes lost sight of by Eco's critics is that this in no way implies that such correlations as the one in our example are merely arbitrary correlations. Rather, Eco has simply drawn attention to the fact that, out of all of the similarities that may be found to exist between any particular sign-vehicle and a potential content, only certain similarities are singled out as significant in any given circumstance. After all, from some perspective, anything can be said to resemble absolutely anything else, producing an all too infinite horizon of possible "similarities", at least too many for most situations other than aesthetic ones wherein such fluidity of association is desired. Stated another way, the perception of a similarity between a sign-vehicle and its content constitutes an interpretive act or, in Eco's terminology, an act of "sign production".

It is perhaps the wish to underscore the notion that signs are actively generated that prompts Eco to propose translating Peirce's trichotomy of signs, i.e., the icon, index and symbol into a "ratio facilis" and "ratio difficilis" distinction. Apparently, for Eco, Peirce's trichotomy is too easily seen in terms of a simple "natural/cultural" or "motivated/arbitrary" opposition. Eco's translation, then, seeks to avoid this by typing signs according to the mode of production employed in expressing and interpreting them in communication.¹

As an integral part of this translation of Peirce, Eco redefines the sign as " everything that, on the grounds of a previously established social convention, can be taken as something standing for something else" (Eco 1976:16). This is Peirce's definition of the sign with an added proviso regarding the social nature of the sign. Clearly, for Eco, the proper object of semiotic study is the totality of culture, conceived of as an ensemble of interpenetrating and mutually defining sign-systems. Thus, he accomplishes in his proposed translation of Peirce the erection of a

framework of semiotic analysis that is especially suitable to the widest possible range of scholarly applications in the humanities. Peirce's semiotic is geared toward scientific inquiry and epistemology. In this regard, Peirce is concerned with the mechanisms by which all minds can be brought to agreement in the interpretation of experience, while by contrast the humanities are concerned with charting the multiplicity of interpretations that characterize mankind's commerce with the world.

It is, of course, too common a notion to require discussion that an individual's conception of reality and general outlook is largely determined by the collective experience of that individual's culture, i.e., determined to the extent that this collective experience has been encoded within the totality of sign-systems that form the cultural setting of that individual. In essence, what Eco has done in his proposed translation is to cross Peirce's broader conception of the component structure of signs and sign relations with Saussure's notion of the mutual interdependence of signs within the framework of specific, i.e., culturally specific, sign-systems or "languages". In this way, Eco has been able to produce a powerful analytical tool geared to describing the processes of evolution and change in the vast array of scientific, social and aesthetic outlooks that characterize different cultures at various times. Specifically, with regard to the "iconic" sign, Eco's innovation has made more visible the fact that the interpretant sign with which an interpreter judges a "something" to "resemble" a "something else" is not simply given in the items to be compared. Nor is it simply produced in an ad hoc or unsystematic fashion by individuals. Rather, it is dependent upon a network of mutually defining sign-forms and sign-values shared, we might say, by a "community of inquirers". To point to a particular area of application, Eco's translation makes more feasible a systematic description of the differing "iconic" criteria in the visual arts of any given culture.

We are entitled to ask, however, regarding any hidden and/or unacceptable costs that Eco's translation might entail. A case in point would be Eco's treatment of specular reflections which, as "embarrassing phenomena", he feels compelled to eliminate straight away from consideration as possible signs. The cornerstone of Eco's justification for denying sign status to images formed in mirrors, images that one

might expect to be capable of signifying a content on the basis of "similarity" (i.e., as signs of the "ratio dif-ficilis" variety), is the notion that the relationship between reflected image and reflected object is "reflexive, symmetrical and transitive" and, therefore, better described as a relationship of equality rather than of similarity or transformation (Eco 1976:201). In other words, Eco can discover no space between the object and its reflection into which a "previously established social convention" can be introduced.

Basically, Eco's argument has the following components: a) the reflected image on the mirror surface coincides in every respect with the visual image of the subject as directly perceived; b) the reflected image cannot be used to lie with; c) object and reflection are necessarily copresent and, thus, the reflected image stands in front of, rather than for, the object; d) the mirror merely serves as an artificial extension of direct perception; and c) being a virtual image, the specular reflection is not a material expression.

Taking these arguments in inverted order, Eco's rejection of the reflected image as a sign-vehicle, on the grounds that it is not a material expression, immediately finds the following objection. If signs must have material expressions for sign-vehicles, then memories, figments of the imagination and a host of other purely mental phenomena would have to be denied sign status. In fact, since any interpreting sign that the mind could possibly bring to bear in any given situation would lack a material expression, semiosis at any level whatsoever would appear to be impossible.

Regarding Eco's notion that the reflected image merely artificially extends direct perception, it may be noted that various electronic media, ranging from radar and infra-red imaging devices used for seeing in the dark to video surveillance cameras, all serve to extend direct perception. And, what is more, these electronic media both convey their images in real time (essentially Eco's third objection) and are constrained to convey only images of those objects that actually fall within their scope (Eco's second objection). If Eco does not find these extensions of direct perception embarrassing, it can only be because they offer a more obvious resistance to interpretation than does the reflected

image. Yet, if we examine what is entailed in "making sense" out of mirror images, we find that their successful use is predicated upon certain assumptions regarding the nature of reflections and their relationship to the objects they reflect. Thus, if instead of turning to meet an individual whose entrance into the room behind me I have observed, I step forward to greet his image in the mirror, I will be treated to a rude lesson in the difference between direct perception and that mediated by specular reflections.

This brings us to Eco's objection regarding the fact that the object and its reflection are necessarily copresent.² Clearly, Eco is thinking of "copresence" in purely physical terms, i.e., in terms of an object being only so many inches or feet from its reflected image, or at least being potentially graspable within a single field of vision as, for instance, the moon and a finger that points at it. The issue of "copresence" takes on a quite different aspect, however, when examined from the standpoint of consciousness. Thus, although a reflected image and the object reflected may be directly juxtaposed in space, image and object are not, on that account, necessarily copresent in one's attention. We may recall Wittgenstein's "rabbit/duck" image in which one could say that both the "rabbit" and the "duck" were, in some objective sense, copresent, yet where only one or the other image could be entertained before the mind. In similar fashion, then, one may attend either to the reflected image or to the object, finding that each, by turns, may be used to call the other into the scope of one's awareness. This bringing of "something else" before the mind is, of course, the classical function of the sign.

Regarding the objection that the reflected image cannot lie, one may observe that, although a mirror cannot produce the image of an object that is not, in fact, there before it, a mirror may yet distort the "truth". For instance, several mirrors in conjunction with one another may compound the images of objects placed before them. Thus, one need only place a small number of flowers at the intersection of two plane mirrors to be provided with what appears to be a full bouquet.

This brings us back finally to Eco's first objection, i.e., that the reflected image on the mirror surface coincides in every respect with the object as directly perceived and thus includes no element of transformation. In terms

of sheer numbers, it would seem that the vast number of reflected images that one comes across in a normal day's activities in fact do not coincide with their reflected objects as directly perceived. For instance, reflected images produced in such non-planar mirrors as polished spoons, the curved surfaces of sunglasses, the pupils of another's eyes, or the chrome on the automobiles that one passes are always distorted and sometimes even unrecognizable. We are all familiar with the distorting mirrors of the fun-house which transform those who stand before them either into bizarrely squat or extremely elongated creatures, or that rubberize a perfectly normal face, making it appear by turns like a pig snout and a crab with eyes at the end of stalks.

And, if these mirrors tend to introduce an element of chaos into the image of objects as directly perceived, there are still others which are designed to introduce greater coherence. Many such examples are found in the realm of anamorphic images wherein curved mirrors, such as polished cylinders or cones, etc., are employed in order to transform otherwise apparently senseless swirls of colored shapes into coherent images.

Since, in these examples, the mirror medium has clearly produced a dramatic transformation of the reflected object, it may be that Eco intends to exclude only those reflected images that are produced in plane mirrors. Even here, however, questions regarding the condition of the mirror, its material composition, shape and immediate context begin to erode any notion that even a plane mirror is a passive conveyor of images. Is the silvering chipped or tarnished, the glass free of dust, fogging, tinting, or imperfections in forming, etc.? We have all had the experience of attempting to remove a spot only to discover that the spot is on the mirror instead of on one's face.

Indeed, we have been assuming a silvered glass mirror. What of burnished copper, brass, tin, aluminum, steel, gold, platinum or even lead backed glass? What of the calm surface of a forest pool or of a hot cup of coffee? What of volcanic glass (obsidian), laquered wood in various hues, polished leather or darkened shop windows? Each of these mirrors has the power to add and/or subtract from the object, e.g., giving it the varnished effect of an old master painting. Or, a darkened shop window may suppress all detail in the darker

areas of the reflected image, perhaps allowing these areas to be filled with light from the objects behind the glass, producing a "cubistic" effect of image interpenetration.

Finally, assuming that very, very special case of a reflecting surface that produces no detectable distortion in color, shape or size, one may yet wonder if there can be any more profound transformation of the object than that of the left-right inversion performed upon it by the mirror. A familiar room becomes hauntingly strange when viewed in a mirror, a left-handed glove becomes a right-handed one, and the written word becomes gibberish. Certainly, the matter of the "handedness" of the universe must count as one of the most profound mysteries to occupy the attentions of alchemist and modern physicist alike.

We may now ask what this all implies for Eco's proposed translation of Peirce. There would appear to be two constructive options open. (1) Eco's theory could simply be amended to include mirror images by pointing, as I have done, to the fact that various differences are, in fact, introduced into any reflected image produced by mirrors and, thus, specular reflections require interpretants to be understood, interpretants quite different from those required to understand the object as directly perceived. Or (2) one may seek to remove those aspects of Eco's theory that result in such unwarranted exclusions.

My remaining remarks will be addressed to this second option which seems to me to be the most productive. It would appear that Eco's difficulties with reflected images stem from his insistence that signs can come into existence only through socially sanctioned channels. This stipulation can only have the effect of limiting the theory's explanatory powers to matters of collective consensus. By comparison, Peirce stresses that signs inevitably result from the mind's attempt to grapple with "that which is present to consciousness", a process that he described as a passage from "Firstness" to "Thirdness" by way of "Secondness". And, for Peirce, this is as true for the naive or newly created mind as it is for the experienced and/or highly socialized mind.

It will be recalled that the element of Secondness is that element which, by forcing the mind to take account of differences, stimulates it to produce an interpretive thought. Having nothing whatsoever to do with logic or rule,

Secondness is a manifestation of that ever present potential for objects to act counter to even our most cherished and long lasting conceptions regarding them, thus demanding of us - new thoughts! It is in this fringe area of the unexpected and the as yet unexplained that Eco's theory falters. Accordingly, he is forced by his theory to maintain, e.g., that the first doctor to single out red spots from among other symptoms on a patient's body and to observe a connection between these and the disease known as measles, did not do so within the framework of a true sign-relation. According to Eco, "red spots" only became a sign of "measles" when the correlation had been ratified by a second doctor (Eco 1976:17). Thus, if the first doctor, instead of sharing his diagnostic insight, had preferred to keep it a professional secret, he would have been in possession of a piece of knowledge not acquired on the basis of the manipulation of signs!

In conclusion, I have attempted to demonstrate the richness of specular reflections as sources of differences which provoke the production of new interpretive signs. To the extent that Eco has shown that individuals enter new territories, such as that of specular reflections, guided by patterns of interpretation that they hold in common with other individuals through the sharing of particular sign-systems, and to the extent that Eco has provided a workable framework of analysis for dealing with such patterns, Eco has made a very practical contribution to semiotics. However, to the extent that he has narrowed semiotic to include only the sphere of socially sanctioned patterns of interpretation which, in Peirce's system, account for only a portion of Thirdness, Eco has denied these patterns a major source of dynamism in unique and particular acts of sign production.

Ironically, then, although Eco's translation of Peirce is geared toward describing the divergent modes of interpretation that distinguish one culture or collective from another, Peirce's "scientific" semiotic actually allows for a much wider range of interpretive acts.

FOOTNOTES

- 1) The principle distinction between "ratio facilis" and "ratio difficilis" signs is a distinction between those

signs with sign-vehicles which come "ready-made", as it were, and those signs with which the sign-vehicles must, conversely, be "invented" in order to be employed in expression. Accordingly, words, and even so called "iconic" signs, such as the stereotypical bent black arrow which, when centered on a diamond shaped field of yellow, announces to the motorist that a curve in the road lies just ahead, are examples of signs largely governed by "ratio facilis". On the other hand, most paintings, maps, photographs, etc., are examples of signs largely governed by "ratio difficilis" since the specific form of the sign-vehicle is uniquely determined by the particular configuration of the specific content that it is used to express. Thus, where the rules governing "ratio facilis" are predominantly rules for producing highly standardized sign-vehicles, those governing "ratio difficilis" are more complex, serving as guides in the orderly projection or transformation of values from the plane of content to the plane of expression, thereby producing sign-vehicles with varying degrees of uniqueness. See (Eco 1976: 217-260).

- 2) Eco (1976:202) expresses this objection in the following way: "The (specular) image . . . does not stand for something else; on the contrary it stands in front of something else, it exists not instead of but because of the presence of that something; when that something disappears the pseudo-image in the mirror disappears too. Even admitting that what happens in a camera obscura is something 'similar' to the phenomenon of specular reflection . . ., what changes is the fact that an image remains traced somewhere".

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SEMIOTIC PHENOMENOLOGY AND PEIRCE

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In assessing Ricour's approach to the "science of language," Bourgeois (1971:122) presents the conditions that must be met in order to justify Semiotic Phenomenology as a theoretical framework for the study of language. He asserts that,

Semiology places this condition on phenomenology: that phenomenology be able to account for a theory of structures, for the system or semiological model, i.e., for a theory of construction and relation of signs. But phenomenology places a condition on semiology: that it adequately account for meaning.

In accounting for a "theory of structures", phenomenology must provide constitutive and regulative rules for a semiotic system or model. On the other hand, some element of the semiotic system must provide the basis for determining the conditions for meaning in that system. In short, Semiotic Phenomenology requires that the function provided by each, as independent methodological approaches to language, be exchanged. Thus, the theory construction process involved in the development of Semiotic Phenomenology requires an integrated approach, and the possibility of this integration of semiotics and phenomenology must be an inherent feature of the philosophical method which grounds the theory construction.

Peirce (1976:869), in a letter to William James, writes

that "I found logic largely on a study which I call Phaneroscopy, which is the keen observation and generalization from the direct Perception of what we are immediately aware of." 'Phaneroscopy' is the term used by Peirce to refer to phenomenology, after 1904-05, and logic, for Peirce, is semiotics. I argue that Peirce's phenomenology, his Doctrine of Categories, accounts for a theory of structures by 1) providing the basis for determining a constitutive rule for his semiotics, as the definition of 'sign,' and 2) providing the basis for determining a set of regulative rules, as the theoretical conventions governing the relations of signs, in Speculative Grammar. I then argue that Peirce's concept of 'Interpretant' provides the basis for a semiotic account of meaning.

I adopt Lanigan's (1979b:35) definition of 'constitutive rule' as that rule which creates "the possibility of behavior and typically has the form: "X counts as Y in context Z."" Constitutive rules create 'boundary conditions' within a semiotic system which are then governed by the rules which regulate the possible combinations or relations of these conditions. 'Regulative rules' provide the theoretical conventions which ground observable social conventions established with respect to particular semiotic systems (e.g., language).

I. PEIRCE'S PHENOMENOLOGY: A THEORY OF STRUCTURES

An exhaustive account of Peirce's phenomenology would, of course, exceed the limits of this essay. I shall instead focus on Peirce's method of description, and the identification of his phenomenology with his Doctrine of Categories.

Peirce writes of 'phaneroscopy', that it is to be the "most primal of all sciences" (5.39;1.186)¹. What Peirce seeks in phenomenology then, is a science that contends with the description of objects, such as they are, prior to the assignment of any specific value judgement. In the same letter to James, Peirce states the object of phenomenological study as that which "we are immediately aware of." In his earlier writings, the scope and purpose of phenomenology is presented as the description of "all the features that are common to whatever is experienced or might conceivably be experienced or become an object of study in any way direct or indirect" (5.37). Thus, Peirce's phenomenology is intended to account for all possible phenomenon, whether it

is "immediately given," or only conceivable (see Ransdell 1978). Moreover, the semiotic system which is grounded in Peirce's phenomenology need not be designed in terms of any pre-existing or specific semiotic process.

Peirce's method of describing all the "common features" of experience begins with his definition of 'Phaneroscopy' as

the description of the phaneron; and by the phaneron I mean the collective total of all that is in any way or in any sense present to the mind, quite regardless of whether it corresponds to anything real or not . . . phaneroscopy . . . is occupied with the formal elements of the phaneron (1.284).

Peirce's definition of 'phaneron' determines it to be nothing less than the object of phenomenological study presented in the preceding paragraph. The description of "all of the features that are common to whatever is experienced" is to be a description of the "formal elements" of the 'phaneron.'

The method of describing the formal elements of the phaneron is outlined in the following passage, in which Peirce provides a more complex definition of 'phaneroscopy':

What I term phaneroscopy [phenomenology] is that study which, supported by the direct observation of phanerons and generalizing its observations, signalizes several broad classes of phanerons; describes the features of each; shows that although they are so inextricably mixed together that no one can be isolated, yet it is manifest that their characters are quite disparate; then proves, beyond question, that a certain very short list comprises all of these broadest categories of phanerons there are; and finally proceeds to the laborious and difficult task of enumerating the principle subdivisions of those categories (1.286).

This method of description comprises, in Freeman's (1934:14) sense, "a description of experience in the most

general terms, in other words, a classification of phenomenon in terms of categories." Thus, the "formal elements of the phaneron" are the categories, and, as Peirce asserts, "beyond these three elements of Firstness, Secondness, and Thirdness, there is nothing else to be found in the phenomenon" (1.347).

How these categories are "found in the phenomenon" is summarized by Savan (1952:187), in his description of the function of Peirce's categories. This function is the "[introduction of] forms of unity into a sensuous manifold there by rendering the manifold cognizable." Peirce's rejection of epistemological foundationalism, in "Questions Concerning Certain Faculties Claimed for Man," established cognition as an inferential, sign-dependent process. Peirce elsewhere asserts that "no cognition has any intellectual significance for what it is in itself," but that cognitions, like signs, are determined by and determine other cognitions (7.357). Accordingly, no phaneron can be present to the mind as a "thing in itself." Hence, the "forms of unity" introduced by the categories are signs, and the "collective total of all that is in any way or in any sense present to the mind" is the collective total signs.

The "classification of phenomenon in terms of the categories," the phenomenological description of the phaneron, engenders a constitutive rule for a semiotic system, which is expressed in the definition of 'sign' as "something which stands to somebody for something in some respect or capacity" (2.228). Or, with more explicit reference to the function of the categories, a sign is a "Representamen . . . a First which stands in such a genuine triadic relation to a Second, called its Object, as to be capable of determining a Third, called its Interpretant" (2.274). Both definitions of 'sign' are alternate means of expressing the previously stated definition of 'constitutive rule': "X counts as Y in context Z." Thus, Peirce's phenomenology satisfies the first condition for Semiotic Phenomenology.

Peirce's definitions of sign provide the structural conditions for that which represents. This element is to be distinguished from what Peirce called the "act or relation of representing" (2.273). The 'act of representing' is a process, which Peirce characterizes in the following passage:

The Object of representation can be nothing but a representation of which the first representation is the interpretant . . . the interpretant is nothing but a representation to which the torch of truth is handed along; and as representation, it has its interpretant again (1.339).

The conventions or 'regulative rules' which govern signs in the process of representation are established by Peirce in the first division of his "second intentional logic," Speculative Grammar.

These regulative rules are first established in Peirce's discussion of the 'First Correlate' (Representamen), 'Second Correlate' (Object), and 'Third Correlate' (Interpretant) of "any triadic relation" (2.235 ff.). He defines the relation of the correlates of triadic relations to one another with the assertion that,

In every genuine Triadic Relation, the First Correlate may be regarded as determining the Third Correlate in some respect; and triadic relations may be divided according as that determination is to having some quality, or to being in some existential relation to the Second Correlate, or to being in some relation of thought to the Second for something (2.241).

Thus Peirce is establishing a rule for determining "in what respect or capacity" a sign "stands to somebody for something." In short, Peirce is providing a general rule for determining a "context of choice" for the manner in which a sign represents its object through an interpretant.

Lanigan (1979a:294) asserts that 'context of choice' determines the "possibilities of choice . . . but no one particular choice is yet stipulated as appropriate, correct, etc. The result is the establishment of a system of cultural conventions or regulative rules that suggest appropriate choices." Similarly, in Peirce, "no one particular choice is yet stipulated as appropriate." The "possibilities of choice" offered by Peirce, however, are analogues of the

categories, and the convention for determining an "appropriate choice" is stipulated in terms of the categories: "Triadic relations are in three ways divisible by trichotomy, according as the First, the Second, or the Third Correlate, respectively, is a mere possibility, an actual existent, or a law" (2.238).

The result of Peirce's division of triadic relations into three trichotomies is the development of additional conventions expressed by the internal divisions of each trichotomy. These conventions then determine the precise "mode of being" of the sign, the specific relation of the sign to its object, and finally, the manner in which the sign is understood. That these divisions are analogues of the categories is suggested by Deledalle and Rh  thor   (1979: 42), in Table 2 below.

Peirce's conventions for the governing of signs are established as theoretical. A model, in the form of truth-functional logic, may then be constructed, and the theory may be applied to any specific semiotic system taken as data (e.g., language). Indeed, this is the point of Peirce's division of "the logic of symbols" into Speculative Grammar, Critic (logic proper), Speculative Rhetoric. And, the theoretical conventions are established in terms of Peirce's Categories, thus satisfying the second requirement for Semiotic Phenomenology, by completing the development of a "theory of structures."²

Tableau 2.--Les neuf types de sous-signes

	1	2	3
(R)1	Qualisigne	Sinsigne	L��gisigne
(O)2	Ic��ne	Indice	Symbole
(I)3	Rh��me	Dicisigne	Argument

II. PEIRCE AND SAUSSURE

The preceding analysis can be confirmed by means of a brief comparison of Peirce and Saussure.

Saussure (1966:16) states his approach to semiology in the Course in General Linguistics with the assertion that,

A science that studies the life of signs within society is conceivable;
it would be part of social psychology and consequently of general psychology; I shall call it Semiology
. . . Semiology would show what constitutes signs, and what laws govern them.

While Saussure did eventually argue for the disassociation of semiology from psychology and sociology, it remained inexorably related to linguistics (Holenstein 1976:186-188n). What "constitutes a sign" in any semiological system, and "what laws govern them," could be determined, Saussure argued, by taking linguistics as a "master-pattern for all branches of semiology." Thus, Saussure begins his approach to semiology through one of its processes which, for Peirce (1976:867), would "only be of use in suggesting and reminding one of the varieties that one might otherwise overlook."

Moreover, Saussure's semiology begins with what Peirce would call "rhetorical evidence." Saussurian semiology is then, from the perspective of Peirce, within the province of Speculative Rhetoric, or Methodeutic. In other words, Saussure's assertion that linguistics stand as the "master-pattern for all branches of semiology" is quite consistent with Peirce's description of Methodeutic as a "method of discovering methods" (3.364).

With Saussure's semiology, the observed linguistic conventions which, as Culler (1976:99) asserts, indicate an underlying semiotic system, are used to generate a "theory of structures" for semiotic systems. The semiotic systems are, in effect, defined by the linguistic process. Thus, Saussure's semiology can be viewed as an abstraction from linguistic data. By contrast, Peirce first presents a "theory of structures" in Speculative Grammar from which a semiotic model (logic) is constructed. Theory is then

applied through a context of Speculative Rhetoric (e.g., linguistics).

This suggests that the semiotics of Peirce and the semiology of Saussure should be seen as complimentary (see also Boon 1979). Indeed, if Peirce's semiotics is the system which grounds observed social or cultural conventions, then Saussure's semiology, as an application of the "Principles of Speculative Rhetoric," can affirm Peirce's system as a "[determination] of the categories" (2.117). In short, the "theory of structures" provided by Peirce's phenomenology, can be confirmed by Saussure's semiology.

III. MEANING

Peirce's phenomenology has been shown to provide the constitutive and regulative rules for a semiotic system, thus satisfying the conditions which semiotics imposes on phenomenology. Some element of Peirce's semiotic system must now be shown to provide an account of meaning.

Umberto Eco (1976:67) asserts that meaning "from a semiotic point of view . . . can only be a cultural unit . . . and a cultural unit can be defined semiotically as a semantic unit inserted into a system." Meaning is determined with respect to what Eco terms the "contents of expressions," which "exist as cultural units within a civilization." In describing the relation of 'content of expression' to 'meaning as a cultural unit,' Eco (1976:69) specifies the element of Peirce's semiotics which satisfies the final requirement for Semiotic Phenomenology. He writes that,

in order to establish that the expression has content the civilization itself elaborated a series of definitions and explanations of the terms involved (persons, nature, etc.). Each definition was a new linguistic (or visual) message whose meaning had in turn to be clarified by means of other linguistic expressions which defined the cultural units carried by the preceding expression. The series of clarifications which circumscribed the cultural units of a society in a continuous progression (always defining them in the form of

sign vehicles) represents the chain of what Peirce called the interpretant.³

The concept of meaning expressed by Eco is the same as the "limited" concept of meaning," to indicate the purpose of a sign," attributed to Peirce by John Fitzgerald (1966: 86-87). This, in Eco's sense, is to "circumscribe the cultural units of society," or to establish the "content of expression" through a process of demarcation and construction. In the sense of "unit" which Eco adopts from Schneider (see Eco 1976:67), "to indicate the purpose of a sign" can be described as the process by which a culture defines and distinguishes "entities." From this perspective, indicating the purpose of a sign can be more precisely defined as the institutionalization of culture.

Boon (1979:83) defines 'culture' as "the set of interactions between a symbolic scheme and the diverse concerns, conscious and unconscious, of some population." The 'institutionalization of culture' is the construction of that symbolic scheme as a social system. The construction process is, in Eco's words, "the chain of what Peirce called the interpretant." 'Meaning as a cultural unit' can now be presented in Peirce's sense as the "[denoting] of the intended interpretant of a symbol" (5.175). Or, as he elsewhere asserts, "the problem of what the "meaning" of an intellectual concept is can only be solved by the study of the interpretants, or proper significate effects, of signs" (5.475).

Peirce's idea of interpretant as the "proper significate effects of signs" permits Eco's 'meaning as a cultural unit', and the construction of Boon's 'symbolic scheme', to be set in the context of meaning which, for Peirce, defines Pragmatism:

In order to ascertain the meaning of an intellectual conception one should consider what practical consequences might conceivably result by necessity from the truth of that conception; and the sum of these consequences will constitute the entire meaning of the conception (5.9).

Thus semiotics, through Peirce's concept of Interpretant, provides the basis for an account of meaning. The integrated approach which is necessary for the construction and justification of Semiotic Phenomenology is then, an inherent feature of Peirce's philosophical system.

NOTES

1. All references to Collected Papers follow the convention of citing volume number and paragraph number.
2. Peirce's division of triadic relations into ten trichotomies and sixty-six classes of signs (see Hardwick 1977: appendix B) suggests an additional aspect of Peirce's integration of semiotics and phenomenology. That is, phenomenological description can be accomplished in semiotic terms; a phenomenological description is, in effect, the typology of a general sign.
3. Thus for example, a 'semantic field' can be defined in semiotic terms as an 'Interpretant' (see Eco 1976:69).

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II. SEMIOTICS OF COMMUNICATION

CONTEXTS FOR LANGUAGE LEARNING:

SEMIOTIC PERSPECTIVES

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Semiotics, or at least the analytic perspective afforded by a semiotic approach, has begun to have an appreciable impact on pedagogy at a variety of levels. Perhaps the most obvious impact has been felt in the relatively broad area of language education, by which I mean those areas of the curriculum in which a focus on language and linguistic interaction is especially productive. These would include research, theory, and praxis associated with reading, writing, foreign and native language instruction and the grayer areas of the contemporary curriculum such as reading instruction in and through the various traditional disciplines.

Increasing numbers of theorists, researchers, and practitioners are becoming aware of the explanatory power of semiotics in language education. This encouraging trend is clearly reaching a ceiling, though, due to a number of formidable obstacles, both conceptual and methodological. Not the least of these is the experimental paradigm indigenous to academic psychology. For a variety of reasons, some undoubtedly political, this discipline and its attendant methodology remain dominant as the acceptable heuristics for examining how humans learn to use language in all its manifestations.

This paper attempts to suggest how language educators invoking a semiotic perspective can offer more compelling interpretations of experimental data by focusing on the key concepts of function and context. A second, and perhaps more fundamental, goal of the paper is to establish the inadequacy of the research methodology which presently dominates the

social sciences. I propose to explain some recent research in language learning by examining these concepts and their relationships to intertextual semiosis, "open" texts, and a transactional theory of the reading process (Rosenblatt 1978; Carey and Harste in press).

By way of illustration, I wish to review two research projects, one in some detail. The first is a replication of a now classic study which attempted to sort out the relative effects of cognitive schemata and social context in invoking a framework for the interpretation of text. The second study examines the interpretive power of an individual's implicit theoretical orientation toward language learning.

In 1977, Anderson, Reynolds, Schallert & Goetz, devised an ingenious experimental study which suggested the fundamental significance of an individual's Weltanschauung in guiding the interpretation of a given text. They suggested that "high level" schemata can influence a person to impose one framework on a message without deliberately or even subconsciously considering others (p. 37).

On the surface at least, one would find little to argue with in these conclusions. The results would appear to be straightforward and decidedly uncontroversial: what an individual knows or thinks he/she knows imposes certain constraints on perception and cognition. While this might be deemed a case of proving that an "obviously true hypothesis is correct" (McQuire 1973), it is not ostensibly a particularly problematic study.

It is only when one considers the research method and design employed in the study (which subsequently was given a prestigious award for outstanding research by the American Educational Research Association) that one begins to suspect a confounding of significant variables. The study focused on reader responses to two ambiguously written passages, each of which would be likely to evoke one of two distinct interpretations depending upon the subject's high level schema. The first text, known within the study as the Prison/Wrestling passage (see Appendix A) evoked a "dominant" or typical interpretation of a prisoner attempting an escape. It could, alternatively, evoke what was considered the non-dominant interpretation of a wrestler attempting to break the hold of an opponent. The theoretical position taken by the investigators was that readers with a relatively

specific (in this case athletic) background would invoke the wrestling interpretation, while other readers with no specific orientation to the text would invoke the dominant prison-scenario interpretation.

As is often the case with conventional psychological experiments, college students served as the subjects. In this case, two groups were used. Physical education and music students--the music students allegedly representing the dominant interpretation--were presented with this and another passage in their respective classes. As a consequence, self selection (via declared major field of study) was employed as the basic background variable. Using a variety of instruments (questionnaires and multiple-choice tests), the subjects' interpretations were sought. The results were predictable. Physical education students tended to employ their background in invoking the nondominant interpretation. Music students, lacking a wrestling schema, tended to invoke the dominant interpretation. (See Table 1).

The replication of the study grew out of a concern for the social semiotic nature of language use, a concept which my colleagues and I felt had been completely confounded if not totally ignored in the original. We suspected, for example, that the semiotic potential of the context in which the experiment had been conducted had somehow been realized but subsequently overlooked in the subjects' responses. It seemed to us beyond question that there had been an important interaction between cognition and the pragmatic conventions associated with the experimental task. Unfortunately, given the design of the original study, it was not possible to sort out these effects since they had all been lumped together under the "cognitive" heading.

At base, of course, was the entire problem of ecological validity. The first conflict was in the use of a manufactured text for an experiment which required authentic response--or at least assumed the authenticity of the response. Clearly, the Clever Hans phenomenon was at work in the development of the study since it was assumed that the students would respond in one of two ways. And, given these expectations, the investigators found what they had expected.

A second, and obviously related, problem was the rather naive attempt at experimental control of anything so

inherently amorphous as background knowledge. The researchers assumed that the declaration of a college major and responses to five questions were sufficiently good indices of life experience to categorize subjects.

My colleagues and I were hesitant, then, about joining this particular game. We were uncomfortable with the idea of lending notoriety and perhaps even more credibility to a study we perceived as being seriously flawed. But, given the attention it had already received and the need to support our position vis à vis context with empirical data, we decided to attempt a replication. By systematically varying the context in which students similar to those in the original study encountered the tasks, we were able to sort out the effects of a loosely-defined "background" and context-of-situation.

A preliminary reading of the original study suggested a serious violation of natural context to the extent that it would be virtually impossible to generalize to more authentic settings. Where else, for example, other than in a psychology experiment, would one be likely to encounter texts written in such an ambiguous fashion? The answer is clear: nowhere. In this sense, the original study was biased before it began in that it existed only within an experimental world.

Also, even the most ardent supporters of the conventional positivistic paradigm are willing to concede that it is impossible to account for all the variance within an experimental situation. Rather, predictions are made on the basis of an implicit theoretical orientation to the process, as to which variables are likely to be the most significant. Traditionally, psychological researchers have chosen obvious but measurable variables such as age, sex, socioeconomic status, and the much-discussed but still ubiquitous IQ. It is interesting to note that it is still relatively rare--despite protests to the contrary--that these researchers ever attempt to account for the local or global effects of context of situation, even in a statistical sense.

Semiotics has clearly taken the lead in providing us with a paradigm for accounting for contextual effects. Unfortunately, neither sociology nor academic psychology perceive the analysis of sign systems as an appropriate paradigm for an investigative methodology. The original study

under consideration here is a prime example of this rather profound lack of insight. Context is completely confounded with virtually all other variables.

My colleagues and I attempted to account for the effects of context by examining not two but three groups of students. We looked at groups similar to those in the original study and subsequently looked at relatively large numbers of similar students in situations dissimilar to those provided for in the original. For example, we studied the responses of physical education students both in physical education classes and in literature classes. We looked at music students in music classes and in physical education classes, etc. Again, the results were predictable. There existed a clear interaction between background and context-of-situation. Even using the experimental approach of the original study, we were able to at least suggest the pragmatic constraints inherent in the situation in which the student encountered the tasks.

The second study considered here focused on the relationships among theoretical orientation toward language, instructional practices, and the exhibition of student responses. This study, decidedly more ethnographic in nature, attempted to deduce evidence of the imposition of systematic

Table 1
Background as Predictor of Passage Interpretation

Passage 1			Passage 2		
Original	Replication		Original	Replication	
	Less Constrained	Constrained		Less Constrained	Constrained
Multiple <u>R</u>					
.79	.66	.39	.52	.47	.23

belief systems on students within the confines of a conventional classroom, which we treated as a sub-culture.

Three public school teachers were interviewed and administered an instrument designed to interpret their respective theoretical orientations toward language and reading (DeFord 1978). Subsequently, data were collected, via videotape, in the classrooms taught by these individuals. Two of the three teachers clearly evinced a reductionistic perspective, while the third provided a more holistic point-of-view--in effect a process orientation--regarding language.

The findings, in summary, suggest a reasonably direct zero-order correlation among the three factors of theoretical orientation, instructional practice, and subsequent student behaviors. In short, the teachers were clearly teaching a specific system of signs. They were making clear--through both explicit and implicit means--the nature of acceptable reading and language behaviors. Those perceiving linguistic interaction in reductionistic terms clearly sought to constrain how students responded to text through a focus on form and surface structure characteristics. They treated reading, and implicitly language, as a perfectable process and did not admit the likelihood that alternative responses are predictable and acceptable results of comprehension. They were unaware, apparently, of the ways in which they constrained or misappropriated the context of their instruction. They treated all texts as bearers of an inherent meaning and gave evidence of perceiving this meaning as residing in the text. There existed for them a single valid interpretation. The responses of their students bore out these assumptions. In effect, the students responded to and were in essence coopted by a specific, albeit implicit, theory of language processing. We know, for example, from the research conducted by Goodman (1973, 1978) and others associated with the reading miscue taxonomy, that proficient readers--which all of us tend to be when not mired in eclectic concerns or instructional approaches--employ interactive or transactive strategies, i.e., those which focus not on a single cue system but on the variety of interrelationships among the various sign systems available in language. Children will, however, deny their natural human tendency to make meaning if they are required to do so in response to the socio-cultural demands of the situation in which they encounter texts.

The teacher who had adopted a more holistic/transactive perspective on language performance tended to encourage decidedly different kinds of linguistic behaviors. Students encountering communicative demands in this situation tended to respond in terms of the semantic constraints and were clearly less concerned with the perfectability of the surface structure of texts. An awareness of the "open" quality of the texts was encouraged and, as a consequence, inter-textual linkages were consistently suggested by the students. Unlimited semiosis and a more relativistic point of view were the result.

Discussion

Clearly, one must be somewhat conservative in interpreting the results of these studies. The replication study, especially, inherited a number of important flaws. The design and methodology are, to be kind, imperfect and in all probability the findings cannot legitimately be offered as evidence regarding the specifics of human text processing.

At the very least, though, the findings of both examples of applied semiotic research suggest the need for academic psychologists to consider the efficacy of providing for context-of-situation as a major variable. Indeed, the replication has already spurred a number of studies which have attempted to consider context in a much more systematic fashion.

In a conundrum of sorts, the studies also suggest the important flaws inherent in any sort of experimental design. The entire notion of decontextualizing research findings (Mishler 1979, Guba 1978) becomes a significant negative factor when one considers the efficacy of the context in guiding the interpretation, not only of texts, but of data of any sort. It is as yet unclear whether a theoretical stance implies a methodology, but at the very least it seems safe to suggest that semiotically-oriented research in the nomothetic sciences must be more aware of the questionable practice of adopting a positivistic metaphor for examining the generation of meaning on the part of human beings. Neither do we wish to make the mistake of late 19th century anthropology which, as Harris (1968:4) suggests, "sought out only those aspects of the human condition which were quixotic, irrational, and inscrutable." But the scientism of the kind implicit in the original study outlined here is

so rampant in the social sciences that some alternative conventions must surely be established.

A further point to be made with regard to these studies has to do with the fundamental concern for meaning which must lay at the heart of research projects which claim to explain or predict human cognition. The semiosis inherent in text processing is given short shrift in a study which uses essentially meaningless texts as a condition of the study. Both the graphic representation of text and the meaning potential inherent in the context of situation must be accorded important roles in the study of human linguistic and communicative behavior. And I don't intend this to be taken merely in a pragmatic, or speech act, sense. If, as Halliday and Culler both suggest (1980, 1981), semiotic patterns are available in the social and cultural conventions which constrain so much of our communicative behavior as "promiscuous and inveterate" makers and interpreters of signs, then we must take into consideration both the global cultural aspects and the focal, social aspects of sign production and interpretation. Clearly, both examples of research reviewed above can best be explained through an overarching semiotic explanation. It is the indexicality of the signs involved in these processes that suggests itself and which is unfortunately ignored by so many social and behavioral scientists. This is revealed too, in the dominant research paradigm which exerts its influence over so many of the research projects accomplished in university settings. These displays of scientism exist primarily as a vehicle for making alleged generalizations during the process of decontextualization.

Discontinuities are unacceptable when they occur at the nexus of theory and data or of research and praxis. Social scientists clearly have a responsibility to articulate both a theoretical stance and to trace the evolution of an appropriate attendant research methodology.

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Appendix A

"Prison/Wrestling" Passage
(Passage #1)

Rocky slowly got up from the mat, planning his escape. He hesitated a moment and thought. Things were not going well. What bothered him most was being held, especially since the charge against him had been weak. He considered his present situation. The lock that held him was strong but he thought he could break it. He knew, however, that his timing would have to be perfect. Rocky was aware that it was because of early roughness that he had been penalized so severely--much too severely from his point of view, The situation was becoming frustrating; the pressure had been grinding on him for too long. He was being ridden unmercifully. Rocky was getting angry now. He felt he was ready to make his move. He knew that his success or failure would depend on what he did in the next few seconds.

THE SEMIOTIC FUNCTION OF AUDIENCE

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According to Umberto Eco (1976: 276), "The semiotic definition of an aesthetic text gives the structured model for the unstructured process of communicative interplay." An aesthetic text such as literature presupposes an addressee who collaborates in its production, for example, the spectator of theatre on the reader of poetry. Aesthetic communication thus relies upon two conditions--a performance and an audience. In this study oral interpretation is taken as paradigmatic for the description of literature. Literature is experienced in its performing, and more properly, in its being read aloud amidst an audience. In performance, neither the text nor the audience consumes the other totally in that a complete reduction is impossible. Mikel Dufrenne (1978: 405) states that "the ambiguous and yet irrefutable existence of the phenomenon testifies that the subject which directs its view, and the object as phenomenon towards which this view is directed are at the same time correlative and distinct: existing at the same by the subject and before the subject." Hence the performance of literature is ongoing and the direction of aesthetic communication unpredictable.

Semiotic analysis holds that the audience defines a function in the performance of literature. To specify audience as a function distinguishes it from the audience as an empirical entity, on the one hand; and the audience as a fixed ideal construct, on the other hand. A function carries the general sense of doing or performing: functions involve us in complex communicative situations characterized by action, change, and movement. Yet the term function is

diversely used, often with some imprecision and confusion. In the following discussion I explicate three different yet relevant senses of function with regard to the audience in the aesthetic communication of a literary text. Following Hubert G. Alexander (1967: 177-201), we can say that function has these meanings: function as a concrete event; function as the appropriate action of a person or object; and function as a correlational rule.

Function as the Concrete Event

In its first sense, function refers to a type of activity or event in its concrete aspects, such as a "church function." This sense of function comprises a systemic description of an event including all its parts and aspects--time, place, persons involved, and subordinate actions within the principal event. In this first sense, we can say that the audience function concretizes literature in a full-bodied aesthesis which includes cognitive, affective, and conative responses. A general description of the audience function is found in the traditional literary locution "the willing suspension of disbelief" that designates moments of "being carried away" in aesthetic communication.

One is carried away--from whence? To where? Ann Jellicoe's (1967: 15-16) description of theatrical experience provides an opening onto the willing suspension of disbelief. She says that

The audience knows they are in a theatre watching a play that is make-believe: it's not really happening. They see before them actors on a stage who pretend to be in a particular, developing situation; the actors invite the audience to join in this make-believe. And, given a good theatrical experience, the audience does indeed enter into the play, it allows itself to be carried away, but for most of the time the audience is well aware of reality. It doesn't lose itself entirely in the fantasy work.

Jellicoe's description makes clear that the audience enjoys a certain "double experience" of simultaneous playing and knowing--which precludes the collapse of playing in the parameters of "make-believe" and knowing in the framework of "reality." In playing, the audience gives itself over to the performance, relinquishes its hold upon

reality, and allows itself to be gathered up and carried away. In knowing that it is playing, the audience retains an awareness of reality as the distance which recalls the boundaries of the performance situation. Thus, to suspend disbelief both puts the frame of belief out of play and gives it over to free play. Or, the audience disbelieves its disbelief.

Whether playing or knowing it is playing, the audience has one object of consciousness, the aesthetic text. As Eco (1976: 276) defines it, "aesthetic text becomes a multiple source of unpredictable 'speech acts' whose real author remains undetermined. . ." The audience's involvement and distance bring into existence a text previously unformulated and continually changing. In this way, disbelieving disbelief denies neither what comes to be labeled reality or fiction prior to performance but assembles in audiencing what to believe or disbelieve. The audience function asks not "what is it?" in order to compare two or more worlds, but "how does it appear to be?"--where 'it' refers to the world concretized in performance. We awaken not from a dream or to reality but to find ourselves already at-the-world (être-au-monde).

The audience expects to go on; there are no "real" consequences from their performance. Hence the audience function cannot be reduced to "what-happens-before-criticism" where reading is a necessary though unreflected and even bothersome precondition for interpretation. Nor is the audience function "what-happens-after-reading" where the act of reception is a derivative reconstruction containing the residues of interpretation (Głowinski 1979: 75-8). The exemplar of oral interpretation--where reading is both a constitutive and critical art--makes clear the audience function as a concrete event. In embodying literature, the oral reader makes definite and specifiable choices which shape a particular world. Yet these very choices throw into relief that which was not chosen--other possible versions of text. In disbelieving their disbelief, the audience is lodged in a field of action which includes any thoughts, feelings, and values to which the performed text gives rise.

The audience's involvement and distance in literary performance is a concrete action. According to Calvin Schrag (1969: 33), "concreteness, in its fundamental sense, is the presence of that which grows together." Concretizing

text correlates literature and audience in the process which conspires an appearance with nothing behind it. The concrete is given holistically and globally, belonging neither only to literary texts nor only to readers. The presence of the concrete specifies the existential immediacy of lived-time and lived-space in the act of disbelieving disbelief. The concrete bestows both the fluidity of playing and blocks of knowing that one is playing. No one stable essence determines meaning once and for all, but only an ongoing process of unitary completion continues to unveil a plurality of meanings.

Function as Appropriate Action

While the first sense of function emphasizes systemic movement within a concrete event, its second sense designates doing or acting in a certain way, for instance, "the function of a policeman" or "the function of a nail." Here function takes on a qualifying or normative sense as that which is appropriate to the person or object under consideration. Hence, we can say that the function of the audience is to complete an aesthetic text. Dufrenne (1973: 46-71) defines the audience function in a double structure: as a performer, the audience collaborates ("per-forms") in textual production; and as a witness the audience simultaneously "gets into form" to apprehend the text.

The audience first of all cooperates in literary performance by making itself bodily present to text. It becomes an audience in the narrower and literal sense of the word which denotes the compact and transitory group actually in attendance at a performance. Here the spectator participates as a performer in mute dialogue with the oral reader. "The text finds a voice which is fully a voice, since this voice is addressed to an audience whose silence is the most moving response" (Dufrenne 1973:49). The audience collaborates in performance by forming a background of pure silence which allows other voices to emerge. Silence is not to be understood as an empirical silence but as lively, bodily listening which draws me outside of myself to others. The term audience emphasizes that, far from an alienating silence, I am with others. Indeed the audience is precisely that group which is not simply an aggregate of its individual members, but that whole unit which takes on a life of its own greater than the sum of its parts.

In the position of a performer, the audience functions as a group united around a text without experiencing alienation. Here it is useful to distinguish the audience-as-performer from a similar social group also gathered for a single and somewhat more rhetorical purpose--the crowd (Nicole 1965: 15-26). First, their type of participation with text differs. The crowd tends to respond unintellectually, often swept by its passions to dissolve in direct action, whether verbal or physical. A crowd loses sight of its objective in compulsive action. By contrast, the audience of literature is controlled by the text which likewise invites and even requires a response, but response from a distance. Dufrenne (1973: 50) observes, "By a thousand ruses the dramatic work reminds the spectator that he is, in fact, a spectator and must not allow himself to take part in the performance." At a distance, the audience displays the knowledge that it is performing which, while perhaps yet "unintellectual," is prereflective. Nor does the audience totally abandon awareness of others in its participation with performance. At any moment during a performance, I can distinguish individual members of the audience, or I can take in the audience as a whole. All of these perceptions present other possibilities for response to text and remind me that, even though I am a group member, I have a unique point of view. This leads to a second distinction between crowd and audience--the type of personal experience each engenders. In a crowd not only is the goal forgotten, but individuals also tend to vanish, to become submerged in the totality of the group, which may end in self-alienation and dehumanization. The audience-as-performer, however, in attending to literary performance and losing itself in the text's contemplation, gains a deeper continuity with self. Thus the performance of literature prepares us to become what we can be in our humanity, that is, what Dufrenne calls a witness.

The witness is present to text not in a determinate physical sense but as a nonphysical spirituelle perspective on meaning. The witness is not limited to any one physical position or point of view. The reader of the novel, for example, has access to multiple points of view, e.g., the narrator, the characters, and the fictitious readers. Lived-time and lived-space are not fixed coordinates, but mobile perspectives in the concretized world. The audience-as-witness is wholly present to an inexhaustible text which involves it in performance. Having "gotten into form," the audience is at once wholly "inside" the text as its adequate

witness. Despite her distance the witness remains in touch with the text, responding in movement to the multiple perspectives which carry her away into the created world. Thus the witness is not a pure disembodied spectator, but a spectator particularly sensitized to the nuances of text. By letting the work take me, I stay with its total situation rather than my point of view or a single character's perspective. In a word, I "derealize" myself in order to realize an aesthetic text. Wolfgang Iser (1975: 202) writes that in the act of reading "we have the apparently paradoxical situation in which the reader is forced to reveal aspects of himself in order to experience a reality different from his own".

Although both Dufrenne and Iser specify that it is as a "solitary and meditative consciousness" that the witness achieves such a communion with text, we must bear in mind the social nature of performance. Oral interpretation makes the presence of others especially clear: the audience-as-witness is different from the isolated and silent reader. Not only does the audience of oral interpretation respond bodily to text, but they also respond as an ensemble, a corporate and corporeal body. As Roger Shattuck (1980: 35) notes, "this is precisely because reading aloud is a public act, open to examination, shared by many observers who can then discuss the 'reading' as they cannot discuss their several private and silent readings." To be an audience is to participate in a social act united around a particular text with others who also perform--be they empirically present or not. The presence of others complements my experience by eliciting variations which simultaneously present other possibilities for meaning and establish the limits of interpretation. Situated with others, I subject my reading to scrutiny in order to contribute to an emergent universality which transcends a particular performance.

Function as a Correlation Rule

The third sense of function specifies how one activity is associated with another, e.g., "the speed of a planet is a function of its distance from the sun." Function correlates two or more activities in terms of a ratio. In this project audience emerges as a function of its action-at-a-distance-from-text-and-others. The audience specifies a mobile locus--the audience's situation simultaneously and ambiguously "outside" the text as a performer and "in-

side" the text as a witness. While the second sense of function emphasizes the appropriate action of the adequate audience, this third sense underlines the situatedness of function which disallows a fixed ratio between text and audience. Function as a correlation rule thus includes the phenomenon of what Jacques Leenhardt (1980: 205-24) calls "rupture," the short-circuit effect which undermines a pre-established reading scheme. This short circuit effect grounds the possibility for the innovative and unexpected performance, or re-organization of perception, that calls into question the mental structures of reception.

The preceding discussion to this point may be summarized in order to specify the audience function. The following structures are intended to be neither exhaustive nor exclusive, but only to suggest the various activities correlated in the audience function.

First, the audience is both physically present (as a performer) and spiritually transcendent to the performance (as a witness). The audience gets carried away by the performance while retaining the distance of self- and other-awareness; it plays and knows that it is playing. Second, the audience both creates a text (as an actual performer) and is created by the text (as its adequate witness). The audience is controlled by the text and therefore predictable to a certain extent, and yet every audience exceeds expectations in unforeseen ways. Hence an audience may be more or less competent, equal or unsuitable to the literature, whether a first-time auditor or an expert critic. Third, the audience's experience involves both personal (the performer's unique point of view) and social meanings (the witness's access to other viewpoints). Every member of the audience understands a text in the light of her personal history and yet shares a communal performance which surpasses an individual interpretation. My experience of a text may differ from yours and still we share a common text. Fourth, every audience is situated in both a particular time and place (the incarnate performer) and within an ongoing tradition of literature (the universal witness). The audience simultaneously participates in an unrepeatable creation as well as within a history of performances which precede and succeed it, among these, for example, previous private readings and subsequent criticism sessions. Fifth, the audience has the experience of being among others

also present to the text (as the public performer) and alone (as the solitary witness). Each audience has a private experience of the text and yet every performance is also public and at least potentially communicable to others also holding the text in common.

Every theme emphasizes that the audience is not one thing but moves among numerous perspectives on the performance. There emerges in performing a voice which belongs neither to text nor to audience and yet to both at once. As the audience, I no longer know who is writing and who is reading, who is speaking and who is listening when individuals and roles dissolve into movement (Merleau-Ponty 1964: 97).

In aesthetic communication the audience functions to correlate the performing and witnessing activities. As Georges Gusdorf (1965: 61) defines it, "communication is a search for the 'you,' and the 'I' and the 'you' tend to join together in the unity of 'we'." How, then, does the audience experience poetic constructs such as the pronouns 'you' and 'I' in an aesthetic text? At first glance, these constructs seem to eliminate the audience altogether, for it is dispensable to their existence. This, however, is emphatically not so. Only the empirical reader and the ideal reader are displaced, but not the audience function (Culler 1978: 161-70). In short, reading always takes place in some context. And here again the exemplar of oral interpretation is instructive.

Recall once more that the language of literature is indirect, i.e., set at a distance from ordinary discourse in the natural attitude. And, the audience forms a margin of silence around literature by disbelieving its disbelief. The audience completes the perspectival shifts that incarnate the pronouns "you" and "I" in a concrete situation. As witness, the audience relates the constructs within the textual world. "You" and "I" are impersonal pronouns, or more traditionally, personae which transcend the empirical limitations of any one performance. Yet, witnessing does not exhaust the poetic audience's presence to text. As performer, the audience links the constructs to the social situation of performance. Now you and I are personal pronouns--that speaker immediately reading and that person immediately spoken to. In the silence of participation and letting-be, the audience allows the other to speak and bring previously unformulated meanings to voice. In the

audience function, not only do we formulate new textual worlds of "you" and "I" as constructs, but we also create new meanings for you and I as persons. We absorb an unfamiliar experience into our personal world. The audience, no less than the text, changes continuously and unpredictably in the act of reading.

Indeed, each individual perspective, whether of text or audience, is changed and enriched by other perspectives in the process of performing. The audience therefore cannot be any one of these perspectives, but must be something other than their singularity or summativity--the whole being incomplete and inexhaustible. Hence, we can say that the audience is that which is not yet formulated--and the locus (both within and outside the text) from which a performance may be comprehended. Here comprehend functions etomologically as that which is grasped together in performing--text, self, and other. The incarnate audience is able to continuously move among and correlate perspectives--textual perspectives and those of others also audiencing. This third function of audience thus grounds the multiple and unique possibilities of aesthetic communication.

In sum, the semiotic function of audience defines three relevant senses of function: as concrete event, as appropriate action, and as correlational rule. To specify audience as a function emergent in aesthetic communication opens it up to several semiotic possibilities. For example, the audience function may be performed by a single person, e.g., an audience of one at a play rehearsal and the solitary silent reader. Audience can also designate a multitude of persons, as in a theatre audience or a public poetry reading. In fact, the audience function expands to consider the publics or readership of literature as well as such "elite" groups as the literati. And finally, one person can perform the audience function for him or herself. The extent to which I speak literature, i.e., oral interpretation, I am a different other for myself (Merleau-Ponty 1964: 97). In any of these variations, what distinguishes the audience is not merely the quantitative measure of an empirical body count, nor only the qualitative ideal construction of a text. Rather, the audience function specifies the bodily ability to perform and witness which allows multiple yet responsible meanings to emerge in aesthetic communication.

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III. APPROACHES TO GESTURE

EXOPHORIC REFERENCE AS AN INTERACTIVE RESOURCE¹

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Certain items of talk, for example demonstratives such as 'this' and 'that', have the property that "instead of being interpreted semantically in their own right, they make reference to something else for their interpretation" (Halliday and Hasan 1976:30). Halliday and Hasan (1976:31) note that such items "are directives indicating that information is to be retrieved from elsewhere" and use the term exophoric reference to designate cases where the information to be retrieved is not in the talk being produced but rather in the situation within which that talk occurs.²

In this paper I wish to examine some ways in which exophoric reference might constitute a resource for the accomplishment of particular tasks posed in the construction of the turn at talk. Data for this analysis will consist of videotapes of actual conversations recorded in a range of natural settings.³

Exophoric reference provides a structure organizing the actions of both speaker and recipient within the turn at talk. By using it the speaker sets the recipient the task of finding the object being pointed to with the demonstrative⁴ and the recipient's performance of this task constitutes the second move in a two move sequence.⁵

A similar task is of course set when the recipient is instructed to find an item not in the surrounding environment but in the talk itself (a situation Halliday and Hasan (1976:33) refer to as 'endophoric reference'). However in the case of exophoric reference the recipient is frequently

required to perform some definite physical movement in order to accomplish the task, such as bringing his gaze to a particular place, and this movement can be observed by the speaker. It is thus possible for the speaker to make inferences within the turn itself, immediately after the use of the exophoric term, about whether or not the recipient has successfully performed the task set him by finding the appropriate item.

One way in which the relevance of the recipient's task for the state of talk being sustained by the participants might be investigated is by examining what happens when this task is not successfully performed. In the following, though a recipient searches for the items referred to by 'these', she is not able to find them and this failure becomes relevant for subsequent talk.

(1) G.26:530 (Simplified Transcript)

A: They didn't have all the colors. The orange is really nice but they only had it in these bowls, and uhm, (0.5) the coffee mugs.

B: Which is orange.

C: The reddy orange.

A: This one.

B: °Oh::.

The recipient's failure shifts the talk following it away from the activity which had been in progress, discussing A's new dishes, to talk repairing the failure of reference.⁶ In this process B's inability to find the bowls or the color that A considers 'really nice' is displayed to all present.

This example highlights the fact that selecting the correct referent from the set of possible referents requires from recipient the use of particular types of competence, as well as close orientation to both the speaker and the event being constructed through his talk.

Successful reference also requires work on the part of the speaker. For example, as part of his task of designing his talk for its recipient⁷, the speaker can and should orient in detail to the particularities of his recipient and the immediate situation in which they are located and analyze whether or not the recipient will be able to find the object being indicated with the chosen demonstrative. If this appears problematic the speaker has the ability to facilitate the recipient's task with other actions, for example further specifying the location of the referent by pointing with some other part of his body. In the present data the speaker in fact directs her face and gaze toward the appropriate bowls.

However, prior to the production of 'these' the recipient has been looking down rather than at the speaker. This raises the possibility that inadequate work on the part of the speaker, as well as the recipient, precipitated the failure of reference, i.e. B is observably not looking at either A or the objects under discussion and might therefore not be situated so as to be able to find the item pointed to with the demonstrative.

Some examples will now be investigated in which the properties of exophoric reference are utilized to accomplish other tasks posed in the construction of the turn at talk. It will be found that in some cases a speaker uses exophoric reference even when he can clearly see that his recipient is not situated so as to be able to see the item pointed to with the demonstrative. Such a finding is relevant to A's use of a demonstrative when B was not looking at her in the last example.

In the following the word 'this' in the phrase 'this wide' locates a gesture being made with the speaker's hands:

(2) G.76:145

A: Ma::n she's this wi:de.

At the time these words are spoken the recipient is gazing away from the speaker and is therefore not able to perceive the gesture (see Figure 1). Further, the speaker is not only able to see this but has in fact just instructed the



Figure 1: 'Ma::n she's this wide.' The speaker is the man in back. Note that his recipient is not positioned to see the hand gesture being pointed to with 'this.'

recipient to move his gaze away from their group to a person in the common scene in front of them:

A: See that one.

B: Huh?

A: The one right straight down there? In the Purple?
(1.5)

B: Where. Down here?

A: No. Right straight down. Down by the horseshoes.

B: Oh yeah.
[[

A: Right down there.

B: Yeah?

A: Ma::n she's this wi:de.

The speaker is therefore using a demonstrative to point to an item that he knows his recipient is not situated to see. Such action does not appear to be consistent with the constraint of recipient design.

The recipient does, however, eventually find the item being pointed to. Immediately after this utterance is produced he moves his gaze to the speaker and then produces a next utterance which is tied to the hand gesture:

A: Ma::n she's this wi:de.
(0.8)

B: And that high.

It appears that rather than simply analyzing whether or not his recipient is positioned to perceive the item pointed to with the demonstrative, the speaker in this example expects his recipient to be able to recognize what would be

required in order to find the relevant item and to take action, in this case moving his gaze back to the speaker, to put himself in a position where this task can be accomplished.

The action taken by the recipient is relevant not only to the problem of determining what is meant by 'this' but also to other tasks posed in the interaction. Within the turn at talk the recipient is expected to gaze at the speaker when the speaker is gazing at him.⁸ In the present example the recipient has just moved his gaze and bodily orientation away from the encounter and is thus not positioned appropriately for further talk. By requesting that the recipient gaze at a particular place the speaker brings his recipient's gaze back to him. The use of exophoric reference thus results in the recipient physically moving and has the effect of realigning the participants into a configuration appropriate for subsequent talk. From such a perspective the speaker's talk is in fact designed in detail not only for the particularities of its recipient but more relevantly, for the tasks facing him in the collaborative work of constructing the turn at talk.

This example supports the possibility that particular items of talk might be produced not on the assumption that their recipient is able to understand them (in the present case by finding the pointed to item) but rather to induce action on the part of the recipient to bring about a state of affairs where understanding becomes possible, such action also being relevant to other tasks posed in the interaction.

Further support for this possibility is provided by the following in which a speaker uses exophoric reference to regain the gaze of a recipient who looks away from her while she is talking:

(3) G.79:22.7

A: So he bought his pillow from a little place where they slept up there. And it was a long pillow. About this long. Feathered pillow. He put it all the way up my back.

Over "and it was a long pillow" one the speaker's recipients disattends her by moving his gaze from her to a pipe he is filling. Over "about this long", which requires for its comprehension attending the speaker's hand gesture, the orientation of this recipient to the speaker's turn is regained when he brings his gaze back to the speaker. Once again a speaker's use of a term instructing its recipient to attend something in the immediate environment has the effect of accomplishing a particular interactive task posed in the construction of the turn, regaining the gaze of a nongazing recipient.

It may be further noted that by dealing with tasks involving the coparticipation of a recipient indirectly, i.e., by posing problems of comprehension whose solution also establishes appropriate orientation by the recipient to the speaker and his turn, the fact that any problem might exist with the orientation of the recipient to the speaker is never made explicit. Rather, unlike what happened after the recipient's failure in example (1), the official focus of activity within the turn remains on the substance of what the speaker is saying.

It was noted above that one factor implicated in the recipient's failure in example (1) was the fact that the speaker there used an exophoric demonstrative when the recipient was not looking at her. The last two examples raise the possibility that this might not demonstrate an inadequate analysis of the recipient. Rather, when faced with a nongazing recipient a speaker can systematically utilize the properties of exophoric reference to regain that recipient's gaze, as indeed happened in example (1), though too late for successful reference.

The data considered in this paper support the argument that exophoric reference is an interactive accomplishment, requiring for its achievement the collaborative work of both speaker and recipient. Further the work they do can be put in the service of the accomplishment of other tasks posed in the construction of the turn at talk. This line of analysis is consistent with the possibility that the elements utilized to construct utterances in states of talk are selected not simply because of linguistic constraints but rather for their interactive properties.

NOTES

1. The research reported here is one aspect of a larger study investigating the interactive organization of gesture, which will be reported in more detail in "Gesture as a Resource for the Organization of Mutual Orientation During Talk", to appear in Approaches to Gesture, a special issue of Semiotica coedited by Adam Kendon and Thomas Blakely.
2. Exophoric reference is a special case of what is sometimes referred to as 'deixis' or, after Peirce, 'indexicality'. The issues such phenomena pose for both the analysis of human thought and for the construction of social phenomena have received some attention from philosophers and sociologists (see for example Bar-Hillel 1954 and Garfinkel 1967). In a very different vein Bernstein (1964, see also the commentary on his work in Halliday and Hasan 1976:34-36) has associated exophoric reference with his 'restricted code' because it realizes particularistic, context-bound meanings. (For a very different perspective on the importance of linguistic formulations 'exhibiting the particulars of the situation of their use' see Schegloff 1972:424-433, footnote 16). The analysis in this paper is not consistent with the argument that exophoric reference possesses such attributes of Bernstein's restricted code as lack of reflexivity.
3. Tape G.26 is a recording of a dinner between two couples in a large city in the eastern United States. Tape G.76 was recorded at a family picnic of the Loyal Order of the Moose in a midwestern city. Tape G.79 is a family reunion in another midwestern city. For further information on the data and how it was recorded see Goodwin 1981. Data is transcribed according to the Jefferson transcription system (Sacks, Schegloff and Jefferson 1974:731-734).
4. Thus Lyons (1977:655) notes that "the English demonstratives 'this' and 'that' used as deictics, can be understood as instructing, or inviting, the addressee to direct his attention to a particular region of the environment in order to find the individual (or group of individuals) that is being referred to."

5. This structure has many of the properties of the two move sequences that Sacks and his colleagues have analyzed as Adjacency Pairs (see for example Sacks 1972, Schegloff and Sacks 1973:295-9, and Sacks, Schegloff and Jefferson 1974: 716-718). For some consideration of other ways that Adjacency Pairs organize phenomena within the turn see Goodwin 1981.

6. Thus Schegloff, Jefferson and Sacks (1977:379-380) noted that "other-initiations of repair locate problems of hearing and/or understanding as 'obstacles' to the production of what would otherwise occupy the sequential position in which they are placed -- an appropriate 'next turn' sequentially implicated by prior turn."

7. Sacks, Schegloff and Jefferson (1974:727) have noted that "perhaps the most general principle which particularizes conversational interaction (is) that of RECIPIENT DESIGN."

With respect to the task of reference Lyons (1977:655) notes that "when the speaker refers to a specific individual by whatever means, he tacitly accepts the convention that he will provide any information (not given in the context) that is necessary for the addressee to identify the individual in question."

For detailed investigation of the types of analysis participants make of each other in order to formulate one phenomenon, place, appropriately see Schegloff (1972). With respect to reference to persons Sacks and Schegloff (1979) note that speakers employ different types of identification to signal whether or not the recipient is expected to recognize the person being referred to.

8. For a more complete analysis of the participants' orientation to this state of affairs, and the procedures utilized to achieve it, see Goodwin (1981, Chapter 2). For other analysis of the organization of gaze within the turn see Kendon (1967).

9. On this issue see Sacks (10/10/67:12). Goffman (1953: 34) notes that "in conversational order, even more than in other social orders, the problem is to employ a sanction which will not destroy by its mere enactment the order which it is designed to maintain."

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SEARCHING FOR A WORD AS AN INTERACTIVE ACTIVITY¹

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This paper investigates the use of gesture and bodily display in the interactive organization of word searches. Here I examine how both speakers in the course of producing a word search in their talk, as well as recipients, in their responses to invitations to coparticipate in such an activity, make integrated use of vocal and nonvocal behaviors.

The following provide some verbal transcripts of word searches:

- (1) Speaker: He pu:t uhm, (0.7) tch! put crabmeat on
th'bo::dum.
- (2) Speaker: Came right out'v, (0.2) where'd she go to.
Magnus E:rwin.

In each of these word searches speaker attempts the search for a word on his/her own, without requesting the aid of a coparticipant. Speaker in each case discusses topics about which recipient is assumed to have no knowledge.

Certain linguistic features, perturbations such as sound stretches (as in "pu:t" in example 1), uhm's, pauses, and cut-offs which initiate the word search, signal that speaker is finding his/her utterance in trouble and is not immediately able to locate an appropriate word. These may be followed either by expressions of self admonishment such as tch!, oh shit!, or hmp! -- types of what Goffman (1981: 109-110) would call "response cries" -- or wh-questions.

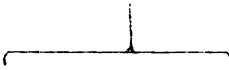
These forms display that speaker cannot immediately find the word in question.

Nonvocal as well as vocal displays signal that the activity in progress is a word search. One way in which speaker may indicate the beginning of a word search is by withdrawing gaze from recipient. During the looking away speaker adopts a gesture which is recognizable in our culture as a thinking face, a gesture which embodies the activity of trying to remember a word. Some examples of such nonvocal behaviors will now be examined.

In the following transcripts gaze is marked with a line above the utterance. Commas signal the movement of gaze away from recipient, while periods mark the movement of gaze toward recipient. The absence of a line indicates the absence of gaze. Periods of silence are indicated in tenths of seconds by numbers placed in parentheses or by dashes, each dash equalling a tenth of a second:

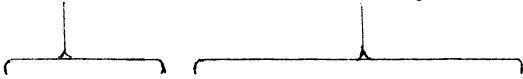
(1a)

word search gesture

Speaker: , , , ,  He pu:t uhm, (0.7) tch! put crabmeat on th'bo::dum.

(2a)

middle distance look word search gesture

Speaker: , , ,  Came right out'v, (0.2) where'd she go to. Magnus E:rwin.

The various stages of the search are marked not only vocally but also visually; word search gestures occur during perturbations and pauses. Gaze withdrawal marks the initiation of the search. In some instances these nonvocal activities may occur prior to any verbal indication that a word search will be initiated.

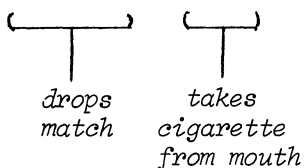
With the prior two examples we have looked at how speaker might attempt a word search on his/her own. By way of contrast, with the next example speaker requests assistance in coming up with a forgotten word:

(3)

- 1 Speaker: Ye-nd uh, (0.4) Muddy Ritz wz saying thet 'e
2 had a rilly good article. ur en article in
the paper the other night.
3 (1.6) About some place, (2.2)
4 M-think ihwz out on Fifty one, or someplace
anywhere. (0.5)
5 It wz like a steak place? (1.2) °What was
6 th'name'v the place tch!
[
7 Recip: Ho: yeaum.
8 Speaker: I can't thi//nk.
9 Recip: Sir: uh no.
10 Speaker: I know it w//as-
11 Recip: Steak'n A:le. (0.2)
12 Speaker: Yeah r:right.
13 Recip: In Mount Pleasant.
14 Speaker: r:Right. (0.2) I knew it wz someplace out on
Fifty One.=
15 But anyway that he'd had a rilly good article
on that.

In this example speaker provides a clear invitation for recipient to coparticipate in the word search activity and recipient responds by assisting. In line 5 speaker produces her talk with rising intonation (It wz like a steak place?) as if she is asking a question to recipient and she looks directly at her hearer. Here in contrast to the first two examples speaker proposes that her recipient has some knowledge about what she is speaking and requests that she coparticipate in the search. In response recipient eventually joins in the search, looking for the forgotten place name.

4. Speaker: M-think ihwz out on Fifty one, or someplace anywhere. (-----)



prepares to smoke

10-11 Speaker: I know it w as-

Recip:

[Steak'n A:le. (--)]

prepares to smoke

12 Speaker: Yeah r:right.

Recip: _____

13 Recip: ' ' ' ' In Mount Pleasant.

Speaker: _____

prepares to smoke

14 Speaker: r:right. (--) I knew it wz someplace out on
Fifty One=But anyway

*cigarette
to lips*

15

that he'd had a rilly good article on that.

The form of coparticipation which speaker proposes at the point of the explicit request ("It wz like a steak place?") in line 5 is quite different from the form of coparticipation which had occurred beforehand. During the first part of her talk (lines 1-4) speaker had been lighting up a cigarette while talking. The smoking activity in the beginning of speaker's talk seems to draw recipient's eyes away (See line 3); recipient disattends speaker partly because she is involved in private activities, unrelated to talk.

However, at the point when she explicitly requests recipient to assist her, speaker withdraws the cigarette from her mouth and abandons the co-occurring activity (See line 5). In this way she displays that the focus of her attention is now totally directed toward the word search. Indeed speaker looks directly at recipient while providing a description of the place she is trying to identify, using rising intonation as if explicitly making a request that recipient come to her assistance. Although this activity does draw recipient's gaze, recipient does not begin to immediately produce a response.

Speaker's next move is to provide a visible display of trying to remember. She produces a remembrance gesture, bringing her hand to her forehead and stroking her head (lines 5-8). Here the activity of making an elaborated gesture is used in much the same way as are other elaborated gestures in the midst of stories which are designed to elicit from recipient an enhanced form of response (Goodwin 1980). Although the object of other gestures modifying talk may be to elicit appreciation, laughter, expressions of amazement or horror, here they are being explicitly employed to elicit involvement in the search for a word.

Recipient with her "Ho: yeaum" (line 7) provides indications that she will assist in the search. Though she does not adopt as elaborated a thinking face as speaker, she does manage to arrange a space in front of her to which her eyes may be lowered and withdrawn from those of speaker (lines 6-9). She puts a finger in front of her which she chews following her first attempt "Sir: uh no." From this posture she emerges as she provides the outcome of the search: "Steak'n A:le." (line 11).

In this example certain features of speaker's bodily displays and gestures are informative to recipient for working out how recipient should participate in the word search. The activity of requesting coparticipation is in part accomplished through the abandonment of other concurrent activities, putting aside smoking, so that the focus of speaker's attention is entirely on the verbal activity in progress. The thinking face gesture is an embodiment of speaker's activity which leads to recipient's involvement in a similar type of activity.

There are, of course, many different optional ways in which a recipient can respond to a request to join in a word search. In reponse to an invitation to coparticipate recipients might not only accept the invitation to coparticipate and enter into the word search with speaker, adopting images of speaker's word search gesture (as in example 3); but also a recipient may choose to indicate inability to participate or display noninvolvement.³

The activity of searching for a word, an activity traditionally regarded by psychologists and psycholinguists as a private activity involving the individual has been investigated in this paper as an interactively orchestrated form of social organization, an event involving gesture, unilateral nonvocal behavior, as well as other forms of gestural display.

NOTES

1. An expanded version of this paper will appear in a future special issue of Semiotica entitled "Approaches to Gesture," coedited by Adam Kendon and Thomas Blakely.
2. Data are transcribed according to a system for capturing the auditory details of conversation designed by Gail Jefferson (Sacks et al. 1974: 731-733).
3. Such possibilities are considered in "Interactive Features of Word Search Gestures" to appear in a future special issue of Semiotica entitled "Approaches to Gesture," coedited by Adam Kendon and Thomas Blakely.

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SLY MOVES: A SEMIOTIC ANALYSIS OF MOVEMENT
IN MARSHALLESE CULTURE

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One time, during the days when Etau was a young boy, there was an object which was a play thing of his. The boy, Etau, took the play thing and gave it to his mother to watch, then he ran off to bathe in the sea. Etau's mother took the toy and placed it under her arm so she would not lose it. Soon though, the toy became uncomfortable, so the mother of Etau took the play object and placed it behind the joint in her knee. It was not fitted to her knee either. Finally, the mother took the play thing (which was in the shape of a vagina) and placed it between her legs. The object fit so well in this location that she could not remove it.

After a time, Etau returned to her and asked her about the toy. The woman, his mother, says she has misplaced the thing, but Etau knows she has taken it for her own (and used it as a vagina). Etau tells her there is an old man down at the lagoon beach making a canoe; he wants her to make a little food for him as he has worked very hard without any rest. Etau then transforms himself into the old man. When his mother brings the food to him, Etau speaks with her as he consumes the food. He talks and talks, joking and telling meaningless tales (kamao) until he finally convinces her to sleep with him.

At that time a man and his wife were out in the land parcels (waito) working, and the woman came upon a pandanus tree with several ripe pandanus fruit. She made a tool to

secure the fruit and climbed the tree to retrieve the pandanus fruit (oakoak bōb). While in the tree, her spouse looked up and saw that the woman was all red between her legs. "Wurur," exclaimed the man, "hurry and come down for there is great damage." The woman climbed to the ground. She went over by her husband and sat down as he explained there was a really big problem. "Do you not see that you are really red in the crotch?" he told her. The woman with him looked to find that what he said was true.

After only a moment, Etao appeared while the two were still sitting and talking about the damage. He asked what the problem was, and the man explained all that he had seen. Etao told the two of them that he could help and he took the man and said, "O. K., you go to a man at the far end of this islet, continue going and going until you reach the farthest point of land, and in that spot you will find a curer who can give you some medicine suited for your woman." As soon as the man departed, Etao took the woman and had intercourse with her, and then disappeared.

When the man returned, his wife was asleep. He woke her and asked what had happened to Etao. The woman revealed the actions Etao has taken to him and the man, since he did not know these methods (wāween), took the woman and had intercourse with her. Since that time, men and women (i.e., mortals) have known how to have sexual intercourse, but before that time they did not know. (L. Marshall Carucci, Field Notes, 1977).

The above stories describe two of the numerous exploits of the sly culture hero, Etao. At this time it is not my purpose to analyze the tales but, instead, to use them to inform us about actions which are typical of Etao. Etao is often called the trickster figure of Marshallese culture. Yet, as Beidelman warns (1980), such characters must be interpreted in the meaning contexts provided by the myths and stories of specific cultures rather than assume that all "tricksters" are of essentially the same character. In the case of Etao, the sly actions in which he engages (and the Marshallese word etao means "sly"), are positively valued as clever and innovative thought processes. The mythical figures encountered by Etao have not been "tricked," they

have been "outwitted." Etao tales always connote unconventional and innovative thought. While his actions are somewhat superhuman and often prohibited, they express the thoughts and repressed desires of mortal men.

All of the stories about Etao are what Geertz (1973, ch. 10) would call primordial happenings. Each records an event of special importance in the construction of the Marshallese universe. The tales recounted above, while mythical, provide the archetypes for man's knowledge of procreative activity (cf., Jung, 1959, vol. 9; 1970). It is not surprising to find that Marshallese make a lot of jokes about procreation and sexual intercourse, utilizing signs rooted in stories of Etao. The use of these same signs as thematic signifiers in the celebration termed Kūrijmōj is considerably more difficult to explain.

This paper shall try to show how a set of signs expressing the sexual exploits of Etao have found a place in a celebration of the birth of Christ. The signifiers to be studied include three motions or movement sequences which recreate actions of Etao. Studying the contexts of these actions should help clarify how movements (which in our culture might be called gestures or mime) can become imbued with meaning, as well as how they transmit meaning. A brief review of the events of Kūrijmōj ("Christmas") is a complex four-month celebration combining traditional and innovative elements with components borrowed from nineteenth century Congregationalism. The celebration of the Enewetak people, as I witnessed it in the winters of 1976-77 and 1977-78, represents the most complex and differentiated festivity in the Marshall Islands. Only the core features of the festivities are reviewed here (for a complete analysis see Carucci, 1980). The festive period begins in early to mid October with a division of the community into three competitive groups. A children's group and church women's group join the three adult groups in some events. Each group starts to practice a series of songs and dances specifically written and choreographed for the occasion.

After about a month of practice (kaatak), groups visit other groups, perform their songs for them, and attempt to outdo both other groups not only in singing but in the presentation of gifts and foods. This competition is called kamolu (ka-: the causative prefix "to make happen" + molu: Marshallese for "song"). The competitions continue until

around December twenty-third. Two games accompany kamolu, the first termed karate (from the Japanese), in which women steal foods and other goods collected by men from other groups, the latter termed kalabuu (from Spanish calaboose), where the men capture women from another singing group in their territory, throw them in jail overnight, and finally return them to their own singing group dressed in male garb.

Of central concern are the events of the twenty-fifth day. At this time, each group prepares food to exchange with members of the other groups. Following this enormous exchange and a short church service, each group performs all of the songs and dances learned in the foregoing months. Each competing group performs two separate types of dances. The first, known as maa (from English "march"), is a line dance which moves participants into the church, scene of the singing and dancing, in an animated fashion. The second dance termed beet (from English "beat") constitutes the central performance, and is oriented toward displaying a group's competence in dancing complex linear patterns and steps. The line dance combines Japanese bon dancing and some ancient Marshallese women's clapping chants. It is well suited to church performances, being far less expressive than the traditional "hula-type" dances which were forbidden by Marshallese missionaries on account of their explicit sexual character. Nonetheless, it is during the performance of the beet that the trickster Etau appears.

Following the singing and dancing, a group will explode its wijke (literally "tree"), a piñata-like construction filled with money. The money will go to the pastor to express people's thanks to the deities (or to God). After each group has performed, all return to their homes to contemplate the activities yet to come. The week after the twenty-fifth day is filled with apprehension and fear. Many are afraid that the supernatural beings present during this time will find people's behavior unacceptable. The Sunday of New Year's Week each singing group will reperform its songs and dances. A smaller food exchange accompanies these performances. On New Year's Eve children will run from house to house singing and wishing all inhabitants a Happy New Year. Noise and light are maintained until dawn, each visitor being rewarded with candy or some other small gift. New Year's Day is spent playing baseball. Each singing group has their own team supported by all other members of the singing group including a very adept women's cheering

section. The first week of the New Year, termed maan yia (the "face" or "front" of the year), is a time to attend dawn church services and exhibit one's best behavior. This represents the last major event of Kūrijmōj.

All of those who participate in the festivities of Kūrijmōj go through a yearly rite of passage (van Gennep, 1960, ed.; Turner, 1969). The rules of daily life are suspended during this time, and persons participate in activities which would normally be prohibited. Only a few of those who attend church are members, yet the physical space within the walls of the church is considered sacred by all. Church members are forbidden from dancing, smoking, drinking, having sexual intercourse out of wedlock, and from engaging in many other activities (cf., Tobin, 1967, 220-21). When non-members enter into the church they also obey these restrictions. Yet, on the twenty-fifth day, all those who enter the church engage in dancing. The normal reserve exhibited in front of the minister is temporarily forgotten, further marking the liminal nature of the events. During this time when the rules of day-to-day life are forgotten, the sly figure Etau appears.

Etau portrays elements of the celebration which most performers would be too shy to enact. The Etau role is usually filled by a middle-aged respected elder (alab), a man of distinction yet not a primary leader of the village. Etau makes fun of the other dancers in his group by performing the same steps, yet purposely missing cues to alter step, change direction, or switch line positions. Thus, the Etau figure will dance with a line of the other sex, dance out into the audience, or continue to perform an earlier part of the dance while all others have made the proper shifts. This performance is aimed at creating laughter among the onlookers, and the goal is always accomplished. Entertainment, however, is not the only aim. The other signs involved in the movements of Etau convey meanings which relate directly to the myths with which we began.

Most notable are a set of movements or short motion sequences portraying Etau's copulative expertise. These movements are derived from traditional Marshallese dances and refer directly to the tales mentioned (in which Etau introduces chiefs and men to their sexual natures). Rather than breaking step with the other dancers, these sequences are introduced by the dancer while continuing the footwork

of all dancers of the beet. Those who are most adept do not miss a step. These are the movements which make the Etao character too embarrassing for younger men to portray. They cannot disassociate themselves from the day-to-day prohibitions which govern their relationships to their older mothers (jinen aorek: "important" mothers), their sisters, and their mother's older brothers. One older man who often portrays Etao told me, "I am not embarrassed, for these movements are the actions of Etao; I am not myself." In the liminal context of Kūrijmōj, his actions become those of the trickster.

The first movement performed is known by several names, one of which is jibadbad. Jibadbad involves a slight spreading of the legs and a forward movement of the pelvis to expose the genital area. A more complex movement involves rotation of the hips, and concomitant movement of the knees, as in the Hawaiian-style hula. This motion is relatively slow, yet performed to the footwork and clapping of the beet. Faster hip motions are also enacted stressing pelvic motions with a primary orientation back to front. These movements are once again performed in tempo with the dance. In some contexts these three movements become highly stylized and accentuated, but in the performance on the twenty-fifth day they will be recognizable though performed with reserve.

The first motion, jibadbad, is a typically female position, yet may be imitated by either males or females. Likewise, the slow hula-style hip movement are traditional female motions. Either of these movements may be performed by male dancers as a means of enticing females from the audience into an active response. On the other hand, the motions may be enacted by female members of the audience who come onto the dance space to either heighten or disrupt the performance. Rapid back to front pelvic motions are a male action, performed exclusively by men. Occasionally a woman will perform a purposive bungling of the motion to indicate the man's lack of sexual aptitude. In one instance, the woman's misperformance was so inept that the Etao dancer came out into the audience to demonstrate his abilities at close range. Not about to concede defeat on the basis of the demonstration, three women from the audience picked up the dancer and carried him from the scene.

The means used to act out these motion sequences reveal as much about the message being transmitted as do the move-

ment themselves. Jibadbad is a female position of sexual receptiveness, but in the performance it may be used as such, or it may be used by men to bring female members of the audience into the action. If a man feels he is about to succeed in bringing a woman from another group into the action, he will reinforce his statement with additional actions. First, he may emphasize the motions of the dance. If this is not entirely successful he may make his meaning more explicit by motioning for the woman to come forward. This may be done with a standard hand motion, arm extended, palm down, moving the hand (and perhaps the forearm) toward the body. A sharp downward head movement might indicate the same thing. In the first case the meaning is changed through a modification of the sign, in the latter case a second concurrent sign modifies the meaning of the first (cf., Kendon, 1980, 246-48).

The slow hip rotations are taken from an ancient woman's dance often performed for chiefs and visitors. Like jibadbad, men may perform the hip rotations to entice women from the audience to respond, or women dancing in response to the performing group may move in this way. Finally, rapid hip motions are used by male dancers impersonating Etau. They are also misperformed by female dancers to suggest that the male dancer himself lacks the sexual expertise of Etau. These two movements, like jibadbad, may be embellished or modified by altering one's performative style or by enacting supplementary signs. Facial expressions and occasionally vocalizations help specify meaning. The hands and feet are largely unavailable as tools for embellishment, for during the entire performance the best dancers maintain the foot movements and clapping patterns of the beet.

A considerable range of meanings can thus be expressed utilizing the three related movement sequences. Each has an unmarked form when performed by the appropriate sex, and a marked form when performed by the opposite sex. These six forms are further modified with supplementary movements and by manipulating the intensity of the performance. But in addition to the immediate significance of the Etau performance described above, a more pervasive cultural significance also exists. To discover this latter significance, we must ask ourselves what a promiscuous figure like Etau is doing in the midst of a celebration of the birth of Christ. We can be sure that dancers performing the above movements are portraying Etau, for participants and onlookers will say

this is the case. But the intrusions of Etao into a sacred ceremony only begin to make sense after considering some more general themes and contexts of Kūrijmōj. Placing these themes next to the primordial events enacted by Etao shall then allow us to answer our question.

Three central themes typify activities of the twenty-fifth day: cleanliness, well-being, and attractiveness. In combination, these three elements help to attain the overall aims of the celebration. Cleanliness or purity is evident in many preparations leading up to the twenty-fifth day. The entire village is cleaned, especially house sites and the church grounds. Clothing is either newly constructed or washed and pressed for the occasion, and all participants must be thoroughly bathed. Well-being is expressed in the huge exchange of food and in the size and number of gifts given to the minister. Attractiveness, however, is the most significant element of the dances. The motions of the dance are meant to attract members of the other groups seated in the audience. An extraordinary performance will encourage members of the audience to come forward and interact with the dancers, and many who come forward will leave a contribution at the altar in behalf of the dancers. The attire of the dancers adds to their attractiveness. All members of a group will ideally be dressed alike, with men wearing black, white or some combination thereof, and women wearing dresses constructed for the occasion of bright, solidly-colored materials. Reds, oranges, and brilliant blues/greens are often offset by white in these special dresses.

Adding to the dancers' attractiveness will be head leis or neck leis which combine scent with the natural beauty of the flowers. Leis made of candy, brightly colored paper, or shells, may also be worn. Perfumes and colognes give an irresistible scent to the dancers. Further attractiveness is provided by hair and skin spotlessly cleaned and coated with oil. Finally, during the performance, dancers (and sometimes members of the audience) will be covered with perfumes, pomade, or other hair greases, sprayed with hair spray, or whitened with baby powder. Each of these items contributes in special ways to the irresistibility of the performers (Carucci, 1980, ch. VIII).

The movements of the Etao dancer connote a special type of attractiveness. They are meant to be sexually appealing. The overall significance of the celebration helps interpret

the meaning of these actions. At one level, the festive period termed Kūrijmōj celebrates the birth of Christ, the savior of the world. The celebration simultaneously attempts to secure regeneration and renewal by ensuring the ongoing plentitude of nature and continuity of subsequent generations of Enewetak people on this earth. For Enewetak people, accomplishing these ends becomes a realization of the promise of everlasting life. The celebration acts as a catalyst in this process by commemorating the yearly return of Jebero ("Pleiades"), Marshallese ruler of the earth. Jebero fertilizes the earth during the months he is not visible, and brings the return of the sun (heat, warmth, the growth of living things) during the months he rules the heavens (see Carucci, 1980, for a thorough analysis). The cyclical renewal performed by Jebero and the biblical symbolism of Christ are not antithetical. They represent alternative paths by which men may attain everlasting life.

Etao thus plays a crucial part in securing regeneration and renewal, for man depends upon reproduction to provide the path to ongoing life. While some early missionaries may have considered the sexual components of the festivities to be antithetical to Christian thought, for Marshallese these components not only provide happiness (one stated goal of the celebration), they provide a means of attaining regeneration and renewal. Etao, the sly culture hero, becomes the means of introducing tabued elements into the church. He is well suited for this purpose, for he always appears when least expected to introduce novel and humorous solutions to the world's perplexing problems. Selecting Etao as the dance figure in Kūrijmōj introduces a sexual component in a humorous way. The recreations of the dancer refer back to the mythological feats of Etao, making note of man's initial introduction to sexuality. From the irresistible movement of the dance comes the energy necessary to transform nature and ensure the continuity of mankind. The transformative context is reconstructed by bringing to life a series of primordial events which took place when the Marshallese universe was first brought into being.

The relevance of the two stories with which we began is now apparent, for within these stories the cultural knowledge necessary to interpret the appearance of Etao in the midst of a sacred ceremonial event is to be found. To understand the meaning of the movements of the Etao dancer, we must be aware of the stories of Etao, and aware of the parallelism between

those tales and the aims of the Kūrijmōj celebration. Only by relating the action sequences to these various cultural contexts can the question of significance be fully answered.

Implications for a theory of meaning

Throughout this paper the terms movement, motion sequence, or action, have been used to talk about continuous sequences of body orientation in space. These terms most closely represent the Marshallese term mokitkit (movement, action, etc.) (cf., Abo, Bender, et. al., 1976, 214: mmakūt -- unstable; move; budge; migrate; motion; pull up stakes). There is no generalized term for gesture, nor are there specific terms for identifiable gesture or motions. In spite of this fact, Marshallese are highly aware of the communicative capacities of actions. They use them not only to modify, elucidate, and emphasize utterances, but motion sequences often constitute the sole medium for transmitting a message. While a term such as "gesture" may be extremely useful in discussing particular body orientations or motion sequences, it is crucial to keep in mind that different cultures will likely define movements and motions uniquely, and that the boundaries between such seemingly explicit categories as "gesture" or "mime," in another culture, may not be at all clear-cut.

The notion of context has proved to be a second focal point in the foregoing analysis of movements and their significance. Many times the movements, poses, and action sequences contained in the Kūrijmōj celebration refer to equivalent or similar sequences from other cultural scenes. The ability of these signs to convey meaning is dependent not only on their conventionality, but also on similarities between the signifier and the signified cultural scene. They are thus what Peirce would have termed indexical signs, second representations in which the signifier and signified bear some "natural" or "existential" relation to one another. The movement sequences of the Etau dancer are in fact recreations of the original actions of Etau, serving to bring the creative power of these actions to bear in a context of regeneration and renewal. The representations form incomplete iconic portrayals. They are indexes, for each "contains a Firstness, and so an Icon as a constituent part of it" (Peirce, 1932, 160).

The action sequences can serve as markers (or indexes) in a second sense, by pointing to the distinction between male and female movements. These signs are manipulated in a doubly indexical manner to make them available as joking mechanisms. The fast hula and slow hula derived from traditional men's and women's dances are switched around in their joking (marked) forms, such that the male roles are portrayed by females and the female roles portrayed by males. Such role reversals provide ample soil for the rooting of a joke.

The advantage of the approach utilized above lies in its ability to maintain a sensitivity to the categories of Marshallese culture. This is crucial, for any significance conveyed by these movements and action sequences must be understood in cultural terms. Early non-verbal theorists often proclaimed the necessity of seeking out cultural categories. Edward T. Hall, for example, was searching for "emic" categories of spatial arrangement. By restricting his field of inquiry to predefined domains (i.e., "intimate," "personal," and "public" interactive distances) (cf., Hall, 1963), the possibility of discovering the significance of indigenous categories was ruled out. All that could be said using such a schema was that groups differed from one another in their tendencies to interact at different distances (see Watson, 1970; Brown, Carucci, et. al., 1973). Cultural context and the significance of interactions were either muddled or lost.

In a similar way, Birdwhistell proposed that the field of kinesics would reveal a series of "kinemes" which would:

combine to form kinemorphs . . . further analyzable into kinemorphic classes which behave like linguistic morphemes. These, analyzed, abstracted, and combined in the full body behavioral stream, prove to form complex kinemorphs which may be analogically related to words. Finally, these are combined by syntactic arrangements, still only partially understood, into extended linked behavioral organizations, the complex kinemorphic constructions, which have many of the properties of the spoken syntactic sentence (1970, 128).

Unfortunately, Birdwhistell has never published an analysis which would justify his complex structural schema. In spite of such problems, these pioneer investigations have prompted in-depth investigations in the semiotic field.

The results of these studies indicate that non-verbal markers and signs have a structural integrity of their own, complementing, but not replicating, that of language. It is not necessary to review these researches, for many of those present have contributed to them. Recent studies of note include Goodwin's work with context specific markers and sequencing rules characteristic of Black confrontational gossip (Goodwin, 1980). Kendon's detailed study of Enga deaf mute sign language further clarifies how meanings are engendered, transmitted, and modified through channels other than conventional language (1980, vol. 2,3,4). Finally, Blakely's work on spatial arrangement promises to provide a series of contextually sensitive markers allowing us to talk about gaze direction and placement in space in Hembra villages (personal communication, 1981). Each of these studies identifies a set of cues, markers, and pragmatically sensitive methods for analyzing different communication styles. Hopefully the foregoing paper, through the analysis of Enewetak movement sequences, has contributed to this effort by providing a method of analyzing the significance of action within a ritual context in Marshallese culture.

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THE STUDY OF GESTURE: SOME REMARKS ON ITS HISTORY

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The modern word 'gesture' is derived from a Latin root gerere which means 'to bear or carry, to take on oneself, to take charge of, to perform or to accomplish.' It derives more immediately from a Mediaeval Latin word 'gestura' which means 'way of carrying' or 'mode of action' (Partridge, 1959) and in its earliest uses in English it referred to the manner of carrying the body, bodily bearing or deportment. Somewhat later it came to be used in Rhetorical treatises to refer to the way in which the body was to be employed in the making of speeches and this usage included, of course, the specific actions of the limbs and face that, nowadays, we usually have in mind when the term 'gesture' is used. It is probably through a specialization of this usage that the modern meaning derived.

For the purposes of the present symposium, 'gesture' was defined as any distinct bodily action that is regarded by participants as being directly involved in the process of deliberate utterance. This includes such actions as thumbing the nose or beckoning and other such named actions. It also includes spontaneous pantomime, improvised in the service of whatever a person may be trying to say, as well as the movements of the hands and head that often accompany speech and are known as 'gesticulation'.

In recent years, as we are all now fully aware, there has been a great growth of interest in the way in which all aspects of human action participate in the process of communication in face-to-face interaction. In particular, so-called 'non-verbal communication' has attracted considerable

attention. Yet it is a curious fact that in spite of the phenomena of 'gesture', as understood here, have received relatively little attention. Indeed, to my knowledge, this symposium is the first ever to have been held in which 'gesture' has served as the defining topic. This relative lack of interest in gesture is recent, however. In former times gesture was regarded as an aspect of human expression of considerable significance. Today, for a number of reasons, we appear to be rediscovering the significance of gesture. In this paper I shall offer a brief review of the history of the study of gesture and show why it appears to have been neglected in recent time. I shall then attempt to identify the factors that are leading to a revival of interest in it. This may help to locate the study of gesture within the broader field of the study of the semiotics of human action.

The earliest explicit concern with gesture as we understand the term here can be found in the works of Rhetoric, both Classical and Mediaeval. Quintilian (100/1922) whose treatise Institutiones Oratoriae served as the standard work on Rhetoric at least until the end of the Mediaeval period, established the subject in five Divisions. The Fifth Division, known as Actio or Pronunciatio, was concerned with the actual conduct of the orator as he delivered his speech. It included a careful consideration of gesture with many forms being defined and instructions for their uses being provided. Treatises devoted exclusively to the use of gesture first appeared in the seventeenth century. The earliest such work appears to have been by Cresollius and it was published in Paris in 1620 (Morris, et al., 1979). The earliest work in English was a book by John Bulwer, published in 1644, entitled Chirologia, or the Natural Language of the Hand whereunto is added Chironomia, or the Art of Manual Rhetoric (Cleary 1974). Other works of this period devoted to gesture include de Conrart's Traite de l'Action de l'Orateur of 1657 and Abbe Bretteville's volume on gesture of 1689 (Angenot 1973). Within the English tradition the next most comprehensive treatise is probably Gilbert Austin's Chironomia which was published in 1802. This book included a detailed notation system for gesture - one which, with some adaptation, perhaps, could be used even today with some advantage - and an extensive treatment of the different kinds of gestures that should be employed in creating different effects, with notated texts for practice. Austin's book influenced the numerous books that were written for instruction in elocution in schools and colleges towards the end of the nineteenth century and at the

beginning of this one. Thus we may note Bacon's Manual of Gesture of 1875, Frances Adams' Gesture and Pantomimic Action of 1891, Ott's How to Gesture of 1902 and Mosher's Essentials of Effective Gesture of 1916.

The burden of this tradition was, of course, prescriptive. From Quintilian through Austin to the textbooks of Ott and Mosher the main concern was to lay down the rules and principles that were to be followed in the use of gesture, and to provide description and instruction so that the pupil could acquire a repertoire of specific actions that were to be used in particular ways and which were ascribed specific meanings. Such books are of interest today because they provide us with information about the gestures actually used on the public stages of former times. They are useful because they may allow us to make studies of the history and development of styles of gesturing.

Philosophical interest in gesture, in modern times, finds an early expression in Francis Bacon's Advancement of Learning of 1605. He takes Aristotle to task for ignoring gesture, and urges that it be studied: "...as the tongue speaketh to the ear, so the hand speaketh to the eye" (quoted in Cleary 1974, p. xiii). Bulwer acknowledges that it was this passage in Bacon that inspired him to write his book on gestures and we find that he has written not only on the art of the use of gesture but that he has provided, in the first part of the book, entitled Chirologia, an account of the uses of gesture in a spirit which today we would call scientific. For Bulwer, as the subtitle of the first part of this book makes clear, gesture was of interest because it was a "natural" language - to be opposed to the artificial inventions of speech - and it deserved close attention for this reason.

The notion of gesture as a "natural" form of expression, and therefore deserving of study for the light it may throw on the fundamental or original nature of man is a very persistent one. It received great impetus from the work of several Philosophes of the French Enlightenment. For example Condillac, who discussed the origin of language at length in his Essay on the Origin of Human Knowledge which was first published in 1756, proposed that language was not the consequence of Divine intervention but that it came about first as an exchange of natural gestures to which vocalizations later became attached. Diderot, who published his Letter on

the Deaf and Dumb in 1751, expressed therein the view that by the study of gesture we might come to apprehend the nature of thought more directly. He supposed that the linear nature of spoken language imposed constraints on expression and he argued that the structure thought appeared to have in its verbally expressed forms reflected the structure of spoken language and not that of thought itself. Gesture, with its possibilities of pictorial expression, made possible the simultaneity of expression that was much closer to the way in which thought actually proceeds.

These philosophical concerns, which gave to the study of gesture a legitimate status, created a climate in which the sign languages of the deaf could be sympathetically studied. It was this climate that made it possible for the Abbe L'Epee, and his successor Sicard, to pioneer the use of sign language in deaf education. This was in sharp contrast to the atmosphere in Britain where Bulwer's views of a century before had had no influence and where the education of the deaf, if undertaken at all, was conducted along strictly oralist lines (Siegal, 1969).

In the nineteenth century we find the philosophical or scientific interest in gesture continued in the work of several leading writers. Thus Edward Tylor, who is regarded as one of the main figures in the founding of anthropology as a modern science, devoted considerable attention to what he termed "gesture language." Tylor's aim, in his first anthropological work, Researches into the History of Mankind, first published in 1865, was to explore through various avenues the underlying question as to whether similarities to be found in different parts of the world were to be accounted for by diffusion or by parallel processes arising because of the fundamental unity of the human mind. He maintained that the "power which man possesses of uttering his thoughts is one of the most essential elements of his civilization" (Tylor 1878, p. 14). Accordingly, he begins his Researches with an exploration of this power. He regards gesture-language, picture-writing and speech as the three principal manifestations of this power of utterance and he devotes the first five chapters of his book to a discussion of them. He admits that speech is by far the most important means by which man can express his thoughts, but he argues that for all its importance in quantitative terms, gesture-language and picture writing merit as much attention, if not more for, so he maintained, although "we cannot at present tell by what steps man came

to express himself in words, we can at least see how he still does come to express himself by signs and pictures, and so get some idea of the nature of this great movement, which no lower animal is known to have made or shown the least sign of making." (Tylor 1878, p. 15). In other words, Tylor maintained that the present form of spoken languages could only be accounted for by a historical process, the stages of which are for the most part quite lost to us. The forms of gesture language and picture writing, however, do not depend upon history to nearly the same degree. By examining how they are formed we can get close to observing the process of utterance in its original form. He undertook original field-work on deaf sign language in Berlin and he reviewed the available work on picture writing and gesture language among the North American Indians and a few other groups. He concludes, "Like the universal language of gestures, the art of picture writing tends to prove that the mind of the uncultured man works in much the same way at all times and everywhere," (Tylor 1878, p. 88).

Another leading figure of nineteenth century science to consider gesture was Wilhelm Wundt, regarded by many as the first experimental psychologist. Wundt had very broad interests, however, and his major work was his Völkerpsychologie in which he sought to establish the psychological processes that underly all of the different aspects of human life. He paid great attention to language and devoted the first volume of his work to it. In his approach to language he sought to account for how thought came to be given expression and he therefore was much preoccupied with the way in which what was 'inner' became transformed into an 'outer' form. Wundt thought that human language could be seen to originate in the innate expressive actions characteristic of emotional states. He saw gesture as a form of expression, more primitive than spoken language, but sharing with it certain essential features, which would allow one to see how truly linguistic expressions could arise from actions which were not, originally, linguistic in function (Wundt 1973).

For both Tylor and Wundt, thus, gestural communication was of central theoretical significance. They both believed that the study of it would provide a special insight into how language could have arisen. Like Tylor, Wundt undertook careful studies of his own of the sign languages of the deaf. Like Tylor, Wundt reviewed the available material on sign languages among the Plains Indians of North America and among

the Cistercian monks. Wundt also took note of the extensive use of gesture among the Neapolitans, as this had been described by di Jorio in 1832. Both Tylor and Wundt believed that an understanding of gesture and of gesture languages would provide a model for the understanding of how spoken language had arisen.

Consonant with this interest in gesture and the belief that its study might serve in a closer understanding of the nature of symbolic processes, we find that a number of leading observers of primitive man of the day devoted considerable attention to it. Garrick Mallery's treatises on American Indian sign language and picture writing are well known and his Smithsonian Institution monograph of 1880, Sign Language Among the North American Indians Compared With that among other Peoples and Deaf-Mutes remains to this day one of the most comprehensive discussions of the whole phenomenon of gestural expression available. Likewise we find that several of the pioneers of anthropology in Australia, such as Howitt, W. E. Roth and T. G. Strehlow paid considerable attention to the sign languages of the Australian aborigines. Roth's report of sign language among the aborigines of North-West Queensland, published in 1890, is still one of the most detailed available. Despite this early concern, sixty years later, when Meggitt (1954) published his paper on Warlpiri sign language, he felt compelled to justify his attention to such a subject - so completely had the interest of anthropologists turned away from such matters.

Why was there such a decline in interest in gesture? Three developments may be noted that probably encouraged it.

First, the question of origins became increasingly less respectable. Already, in 1865, the Linguistics Society of Paris had ruled all papers on language origins out of order. In 1872 the President of the Philological Society in London gave an address which likewise condemned speculation on language origins as futile (Stam 1976). This removed one of the most important theoretical justifications for the study of gesture. A similar move away from a concern with origins can also be discerned in anthropology. Whereas, at the end of the nineteenth century the diverse cultures European scholars were becoming aware of were still treated in evolutionary terms, with the rise of cultural anthropology in the United States and of social anthropology in Great Britain, itself much indebted to the work of Durkheim in France,

structural and functional accounts came into vogue. Furthermore, the kind of collecting of curious facts, characteristic of the nineteenth century ethnographers, gave way to an approach in which only those aspects of a culture were described which could be articulated within an overall functionalist framework. Gesture which, as Tylor himself had noted, was really at the margins of practical importance, except for special groups, was neglected along with much else because it did not seem to be worth fitting within the theoretical frameworks then prevailing.

At the same time as these developments were under way, linguistics was freeing itself of its historical bias and was becoming established as an autonomous discipline with an increasing degree of methodological and theoretical rigor. Although several of those who pioneered the development of modern linguistics, at least in the United States, for example Franz Boas and Edward Sapir expressed considerable interest in gesture - it was Boas, after all, who supervised and supported Efron's (1941) famous study of Jewish and Italian gesturing styles, undertaken in the late nineteen thirties - they did not undertake any serious study of gesture themselves. Once again, gestural phenomena seemed somehow marginal to the business of speech. In any case there was no way in which they could be incorporated into the neat structures generated by contrastive analysis.

In psychology, by 1920 or so, behaviorism was sweeping all before it and the work of such writers as Wundt was soon dismissed as too mentalistic. Gesture ceased to be of much interest in psychology because it smacked too much of conscious invention, and it could be dealt with neither in terms of the framework of conditioned reflexes nor within the framework of psychoanalytic theory. So far as the latter was concerned, interest was to be focused upon those aspects of human action that could be deemed symptomatic of unconscious motives, but gesture did not fit into this category.

For these reasons, then, we may see how gesture no longer was perceived as having relevance for any of the dominating theoretical concerns of the disciplines that before had taken it up. For a long time it remained the province of the folklorist, or the subject of semi-popular or popular books, but it commanded little in the way of serious scholarly attention and indeed, as Meggitt's 'apology' in his paper on Warlpiri sign language suggests, it was even

perceived in some circles, at least, to be at best a matter for idle curiosity.

Just after the close of the second World War there developed a new interest in communication. In formation theory and cybernetics provided new and highly general models for the analysis of communication processes and seemed to offer the hope that human communication would be provided with powerful new tools of analysis. Once human action was conceived of as if it were a code in an information transmission system, the question of the nature of the coding system came under scrutiny. Much was made of the distinction between 'analogical' and 'digital' codes. Language, it seemed clear, was an example of a digital code. Aspects of behavior, such as facial expression and bodily movement which appeared to vary in a continuous fashion were said to encode information analogically. The sharp dichotomy that this proposed gave rise to the notion of "non-verbal communication." Such communication was seen as employing devices quite different from those of spoken language and it was regarded as having sharply different functions. "Nonverbal communication" was seen as having to do with the processes by which interpersonal relations were established and maintained, where the digital codes of spoken language were concerned with conveying propositional information. The efflorescence of research in "nonverbal communication" that followed was directed, in consequence, to aspects of behavior that clearly did not have the functions of spoken language. Gesture, though often referred to, was little investigated in this tradition perhaps because it was less clearly involved in interpersonal functions and was too close to the seemingly conscious, inventive processes of language (Kendon 1981).

An important figure who is often credited with much influence in these developments is Ray L. Birdwhistell. His proposal for a kinesics, in which he attempted to employ the methods of structural linguistics as a model for the analysis of body motion communication, might have been expected to have led to many studies of gesture. In fact this appears not to have happened. Indeed, Birdwhistell himself appears to have largely excluded the study of gesture from his conception of kinesics. Thus, in referring to complex gesticulation he has written: "At the moment I am inclined to regard such behavior as examples of derived communication systems. As such they are not the primary subject matter of kinesics at the present." (Birdwhistell, 1970, p. 126)

It appears, thus, that gesture was left without a theoretical framework in which its study could readily be pursued. To be sure, one or two recent writers, notably Morton Wiener (Wiener, et. al. 1972) and Paul Ekman (Ekman & Friesen, 1969) have provided formulations that are intended to accomodate gesture within the field of "nonverbal communication". However, their efforts have remained somewhat isolated. In Ekman's case this may be because his major research has been directed elsewhere, but his widely cited classification scheme embodying his notions of "emblem" and "illustrator" has not as yet led to any sustained research into the phenomena of gesture.

Certain other developments, quite outside the domain usually occupied by students of "nonverbal communication" have recently taken place, however, which suggest to me, at least, that we may be on the threshold of a major re-evaluation of the phenomena of gesture. Let me remind you of these briefly.

First, speculation on language origins is once again a respectable activity. As Charles Hockett (1978) has put it, it is no longer the case that on this subject one person's whimsy is as good as another's. There are basic guidelines. We know so much more about human evolution as a result of development in palaeontology and anachaeology and from the expansion of comparative behavior studies that at least our whimsies have to be supported by large amounts of fact. An important impetus in the recent revival of this topic as a subject for serious discussion was Gordon Hewes' paper in 1973 (Hewes, 1973) in which he marshalled arguments to support the hypothesis that the first form of language must have been gestural. His paper showed convincingly how wide a range of relevant material was now available. By emphasizing the role of gesture he brought it once again to the attention of a large number of people as a topic of possible central theoretical importance.

One of the most important pillars on which Hewes' argument rested was built from the findings of the Gardners who had reported what struck many as quite surprising success in teaching a version of sign language to a young chimpanzee. For their findings to be properly evaluated, however, it became necessary to evaluate the status of sign language. I do not believe that it is wholly coincidental that the serious study of sign languages of the deaf got under way

very soon after the Gardners' initial report. William Stokoe had, in 1960, published a structural analysis of American Sign Language and had shown thereby, quite clearly, that it was a linguistic system in its own right with its own properties, but this work was not taken up on any large scale until more than ten years later. Today sign language studies are going forward at an extremely rapid pace (Stokoe 1980). Sign language is now understood by many as providing an important challenge to general linguistic theory because it is seen that any theory of language must now be formulated to include it even though it is, in many ways, different from spoken language because it employs such a different medium of expression.

Sign language and gesture are not to be identified but it is clear that an understanding of the one is highly relevant to an understanding of the other. The theoretical relevance that sign language is now perceived to have is bound to contribute to the reinstatement of gesture as a matter for serious investigation.

Finally, recent developments in the study of how children come to be able to use language have focused the attention of numerous workers on the importance of gesture as part of the process of utterance. The investigation of language acquisition in children has shifted more and more towards an investigation of the acquisition of the ability to engage in actions of semantic significance, whether these be spoken or gestured. It is coming to be seen that prior to the use of spoken language, children make considerable use of visible action as a means of utterance (See, especially, Bates 1979, Lock 1980). An understanding of gesture is thus relevant for an understanding of linguistic competence and how this is acquired. Again, this means that the study of gesture will be perceived as a serious matter.

For these reasons, it seems to me, the time is ripe for a fresh look at the full range of gestural phenomena. Studies of the kind we have heard today can now be given a place of some sort in the wider endeavor now in progress toward a more broadly based understanding of human symbolic processes. A few years ago we would not have been able to see the relevance of such gesture studies in this light. Today, I believe, they will once again occupy an important place on the stage of the human sciences, as they did for Tylor and Wundt a century or more ago.

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IV. NEGLECTED FIGURES IN THE
HISTORY OF SEMIOTIC INQUIRY

FRANCIS LIEBER AND THE SEMIOTICS OF LAW AND POLITICS

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"The signs which man uses, the using of which implies intention, for the purpose of conveying ideas or notions to his fellow-creatures, are very various, for instance, gestures, signals, telegraphs, monuments, sculpture of all kinds, pictorial and hieroglyphic signs, the stamp on coins, seals, beacons, buoys, insignia, ejaculations, articulate sounds, or their representations, that is, phonetic characters on stones, wood, leaves, paper, etc., entire periods, or single words, such as names in a particular place, and whatever other signs, even the flowers in the flower language of the East, might be enumerated...These signs then are used to convey certain ideas, and interpretation, in its widest meaning, is the discovery and representation of the true meaning of any sign used to convey ideas" (Legal and Political Hermeneutics...1839: 17, 18).

To paraphrase the legendary Isaac: the thought is the thought of modern semiotics, but the words are the words of Francis Lieber.

Again, in the following, it is almost Peirce we seem to hear: "There is no direct communion between the minds of men; whatever thoughts, emotions, conceptions, ideas of delight or sufference we feel urged to impart to other individuals, we cannot obtain our object without resorting to the outward manifestation of that which moves us inwardly, that is, to signs...There is no immediate communion between the minds of individuals, as long as we are on this earth, without signs... Signs, in this most comprehensive sense, would include all manifestations of the inward man, and extend as well to the

deeds performed by an individual, inasmuch as they enable us to understand his plans and motives, as to those signs used for the sole purpose of expressing some ideas; in other words, the term would include all marks intentional or unintentional, by which the individual may understand the mind or the whole disposition of another, as well as those which express a single idea or emotion" (Hermeneutics...1839: 2-3).

My title would suggest that my interest in Francis Lieber, who wrote these thoughts on his theory of signs and the interpretation of signs and their relations some thirty years or so before Peirce speaks of signs in "Some Consequences..." (1869), is restricted to semiosis in law and politics; but actually we find in reading Lieber that his major work on Political Ethics illuminates some of the most complicated relationships between Logic, Ethics, and Esthetics, in Peirce's Normative Science division of his philosophy of signs.

For example, Lieber, as Peirce after him, concurs with Locke in denying the possibility of innate ideas. But, as Lieber points out, there is a problem: if, as Locke insists, opinion and conscience are developments of rational processes, from whence comes the first mark on the blank surface of the moral human being? This problem of conscience, Lieber says, divides philosophy into two camps. It separates philosophers who uphold the notion of innate ideas from those who, like Locke, (Essay...Book I, Chap. iii), claim that all opinion is achieved through reason. Lieber's attempt to resolve what he calls Locke's confused explanation of the emergence of an ethical person leads him to the realization that we must not confound "the idea of artificiality, or unnaturalness, with that of development" (Pol. Ethics: 1839:39).

If we can accept a "primordial" or primitive predisposition in human beings which, in a rudimentary but unmistakable way, is capable of discriminating right from wrong, then all else Locke says in his denial of innate ideas must be admissible. Thus, a primitive predisposition must be seen as a material, factual function of the human being, enabling him to evolve this capability into what he calls conscience.

At first, there is a consciousness of right and wrong, Lieber says, and this consciousness as I understand it is as basic as hunger, or sleepiness, for example; thus, eating is to hunger, or sleeping is to sleepiness as a conscience is

to a being conscious of distinctions between good and bad, right and wrong. This consciousness is no more mysterious, according to Lieber, than any other part of the physical human being which distinguishes it from nonhuman beings. Consciousness, then, I might add, is such a thumb which functions in the construction of human communities.

Like Locke, Lieber maintains that concurrent with the development of conscience, people move out of a natural state -- (Locke's term) -- to a commonwealth; they do so, as Locke describes, through the process of Natural Law. Once there is mutual assent to natural law between people, the state of nature is left behind, and they have evolved to agents in community. Natural Law is an interactive, dialogic process.

These concepts will not be discussed closely here, but are mentioned in this short time in order to emphasize that to Lieber all acting is inseparable from exchange. He tells us correctly that we find, widespread throughout the world, that the word for action refers to a commercial house, a market, or a stock-exchange; the word, "acting" is used synonymously with the carrying-on of trade (Pol. Eth. 1839: 28).

Further, Lieber says that if man is less restricted than nonhumans and more directive of his own purposeful actions than nonhumans, then one may rightly conclude that the notion of free action must imply the notion of free trade. One is unfree, I suggest, to the extent one is bound by physical limitations, as animals are; one is free, however, in one's rationality. This notion of freedom accords with Locke's, and is in line with the sense that Peirce suggests that our choice of action, of our process of choosing, before commitment, is an aesthetically-marked freedom; it is the freedom characteristic of Schiller's notion of Play, for example, as I discuss elsewhere (Kevelson, 1981b).

Lieber goes on to say that so long as a person is able to reflect and to make choices, and to act on these choices, he is self-determining. Rationality is freedom. In this sense all people who are rational are free to direct their manner of exchange with others. But precisely because of this freedom, because certain motives may lead one to make choices which are not ethically "right," but ethically "wrong," we see that the conclusion, or consequence of an

ethical action can be probably, but not absolutely, true.

We may significantly compare, then, the quality of Lieber's consciousness of right and wrong with Peirce's category of Firstness; we may say that the conscience, at each subsequent stage of interpretive development, is, in Peirce's sense, an Interpretant Sign.

For example, the testing of one's choice of action in the world of experience can be compared to the Secondness through which the rewards and punishments of an act may be opposed and evaluated; finally, the choice of action becomes a Law, or is regarded as if it were a law. When certain ethical actions are referential in community -- in the common-wealth of acting, that is, of exchanging rational persons -- the valued, customary act has a normative function, and is a Thirdness, according to Peirce's terminology. Whether or not the prevailing lawlike ethical norm is legislated into practical law is another question, and this would lead into the investigation of practical law. Lieber carefully distinguishes theoretical law from practical law. Practical law includes that entire experiential domain he analyses in his Political Ethics.

Lieber argues against axiomatic, syllogistic thinking as a mode of deciding, in both Political Ethics and theoretical or Natural Law. He says: "Every science, even mathematics, has to start from some axioms, that is, from truths which must be either supposed to have been proved by other sciences, or are self-evident in their nature...It appears to me that the only axiom necessary to establish the science of natural law is this: 'I exist as a human being, therefore I have a right to exist as a human being'"(Pol. Eth. 1839: 67-68).

Although the principle of the precedent is essential in the development of all societies, and should be sharply distinguished from dictation or command, every "progressive continuum" requires a precedent. But however we regard precedential decision to rest on law and reason, which is law itself, he says, no precedent is absolute. No precedent is unchangeable. "A precedent can be overruled," he insists, but only be the law, that is, only by the process of reason (Civil Liberty and Self-Government, 1853:212)

How very close is Lieber here to Peirce's notion of the provisional aspect of judgement-signs!

One further point must be made: Although Lieber took issue with Locke on many points, and was indeed highly critical of Locke's actions particularly with respect to Locke's contribution to the drafting of the Constitution of South Carolina (see Lieber's Civil Liberty...p. 211), they are of one mind in their evaluation of the importance of the individual, if not always on the meaning of "interpretation."

For example, in order for man qua man to be an ethical being, Lieber finds it necessary to emphasize the supremacy of the individual person. He says, "Man's whole ethic character is materially founded upon or can be imagined only in conjunction with his individuality. Man's individuality and sociality form the two poles round which his whole life revolves...The peculiarity in man is that he can fulfil his destiny in a state of society only, and that he has to bear weal and woe jointly with his fellow-creatures...As to his individuality, it is necessary to observe that man is what he is, first and essentially, as an individual. His senses, perceptions, thoughts, pleasures, pains, emotions, his reasoning, appetites, and endeavors, are individually his own. Philosophically speaking, he cannot act through another; his acts are his own; for if he be forced to do anything against his will, he does not act in the philosophical sense of the term, but he suffers..." (Pol. Ethics, 1839:56-58).

A point I wish to make, which I discuss fully elsewhere, is that if one individual infers meaning from another individual, and they reach an accord together, in community, as interactive agents in agreement about a sign they will hold together as a Law, or General, then we must see that the entire process of inferring ethical values is an inductive process, or as Mill has said, we infer from individual to individual, from particular to particular. Such is Peirce's thesis, which cannot in his criticism of Mill be examined here. It must suffice to mention in passing, however, that just as logic, "the science of the general laws of signs" (CP 1.191), looks to ethics for its leading principles, ethics, "the science of right and wrong, must appeal to Esthetics for aid in determining the summum bonum." But ethics must be more than the mere "conformity of action to an ideal," for that would be what Peirce calls "Antethics." Ethics is a "sort of composite photograph of the conscience of the members of the community" (ms 283:39).

An ideal ethical sign, or pattern of interactive communal

life is a sign which is initially perceived in its iconic function, Peirce suggests, and is a kind of diagram. In a similar sense, Lieber says that "Every idea has its caricature, and the more unfailling so, the more actively and practically the idea is working in real life" (Civil Liberty and Self-Gov't: 1953:213). Further discussion on ethics, the individual, and induction in Peirce's semiotics should consider closely his Doctrine of Chances, an area of thought which exceeds our time here.

But in the following I do want to touch on the "Chance" non-meeting of Lieber and Peirce:

First, consider that Francis Lieber had fled from Germany to England in the 1820's to escape persecution for his liberal views. In England he quickly became the respected and close associate of the then famous jurists, Jeremy Bentham and John Austin. We will recall that Charles Peirce, also, was to reflect in a significant manner the influence -- direct and indirect -- of both Bentham and Austin. Although Peirce's differences with Bentham are numerous and important, Peirce acknowledges his indebtedness to Bentham's concepts of Philosophic observation, namely coenoscopy and idioscopy (The Nation 81, 1905, CP1.80-92, 1903; 56-7). He also makes interesting use of the Benthamite notion of legal fiction. On a personal level, Bentham is known to Peirce through St. John Green, a co-member of the Metaphysical Club in Cambridge in the early 1870's, a disciple of Bentham, Peirce tells us, of whom he was most fond and describes "as a skillful lawyer and a learned one...(whose) extraordinary power of disrobing warm and breathing truth of the draperies of long worn formulas was what attracted attention to him everywhere. In particular, he often urged the importance of applying Bain's definition of belief, as 'that upon which a man is prepared to act.' From this definition, pragmatism is scarce more than a corollary; so that I am disposed to think of him as the grandfather of pragmatism." Let us recall, in passing, that if Bain is the grandfather of modern pragmatism, Berkely, Peirce says, not Kant, is the "father of all modern philosophy...(and) the author...of modern 'pragmatism'..." (1901, from Review of The Works of George Berkely by A. C. Fraser, The Nation 73, August 1, pp. 95-96, reprinted in Ketner and Cook, 1979, p. 36). (LW, 1909, in Hardwick: 1977:114; see also M. Fisch, 1964.)

My introduction to Francis Lieber takes this roundabout

way, through Peirce, through the direct sources of his pragmatism, and the role of observation in semiotic processes, because, as I am suggesting, Lieber's major works on the interpretation of signs in law and politics, and on Ethics, complements Peirce's Semiotics, perhaps clarifies some of Peirce's difficult metaphysics in significant ways, and as I will suggest in this paper, may even have contributed, by indirection, to major aspects of Peirce's seminal thought.

John Austin, to whom I refer above as one of the close, lifelong friends of Lieber, had been engaged, as we know, in the now-classic controversy with Justice Oliver Wendell Holmes over Austin's assumption that Law is the Command of the Sovereign. This controversy was at its peak around the time that the Metaphysical Club held its meetings; we know from Peirce that Holmes was an honored participant in these meetings; and, as Max Fisch has surmised, it is altogether likely that much of the discussion at these meetings centered on problems and questions of jurisprudential import (Fisch: 1964:3-32).

But an even more important link in the relationship between Lieber and Peirce and their respective theories of signs -- even more important than their anti-Hegelian positions, than their mutual early and profound dedication to the poet Schiller's belief that freedom is the objective of Aesthetics, even than their qualified but enduring indebtedness to Kant -- is their direct line from John Locke. As siblings, one might say, Peirce's and Lieber's descent from Locke has taken a curious route.

It is commonplace to show that Peirce adapts with little modification Locke's term, Semiotic, from the Essay concerning Humane Understanding. Locke, also, is credited with having taken "the first steps in profound analyses" of probable argument (from "Doctrine of Chances," 1878; CP 2.647-57; 2.658), a fact which, as we will see, is crucial for our understanding of why Peirce is to insist that while logic "depends upon mathematics" it depends "still more intimately upon ethics" (from "The Minute Logic," 1902; CP 4.232-246). Worth noting briefly here, is that Peirce says that in the contemplation of ethical ideals we find an esthetic quality, and that "Every man has certain ideals of the general description of conduct that befits a rational animal in his particular station in life, what most accords with his total nature and relations..." (1903 "Ideals of Conduct," Lowell Lecture I, 3rd draft, 611-615,

Vol. 2: CP 1.591). Elsewhere, in discussing the subdivisions of the Normative Sciences, Logic, Ethics, Esthetics, Peirce points to the separation between the theoretical and the applied sciences, and while, as he observes, the practical sciences are rarely directly influenced by philosophy, it is primarily through Ethics that the connection between the theoretical and the practical is effected. Peirce deplores the fact that "Ethics is courteously invited to make a suggestion now and then in law, jurisprudence, and sociology. Its sedulous exclusion from diplomacy and economics is immense folly..." (CP 1.251).

There is certainly little to be found in this or other of Peirce's often ironic comments on the mutual exclusion of the speculative and the practical sciences which warrants, in my opinion, the widely shared opinion among Peirce scholars that Peirce was unconcerned with the world of practical affairs. E.g., Richard Bernstein's observation (1971: 80) that "Peirce was almost totally indifferent to the concrete problems of social and political philosophy," is widely shared but wrong. It is true that there is little if anything in all of Peirce's writings to suggest he was even aware of the great Civil War in this country, or concerned that social, academic, economic, political changes of revolutionary magnitude were taking place all around him with no less a public figure than Francis Lieber at the center and in the thick of much of it. Yet, although we do not find explicit reference to Locke's Letter Concerning Toleration (1689) which is said to hold the key to his entire philosophy, or even much that would suggest Peirce had closely studied Locke's Two Treatises on Government, we know these works were well known to him and known, perhaps, as well as the Essay whose influence is so much more apparent.

It is with enormous admiration that Peirce writes, "Locke's grand word was substantially this: 'Men must think for themselves, and genuine thought is an act of perception. Men must see out of their own eyes, and it will not do to smother individual thought -- the only thought there is -- beneath the weight of general propositions, laid down as innate and infallible, but really only traditional -- oppressive and unwholesome heritages from a barbarous and stupid past.'" Peirce goes on to say his review of A. C. Fraser's study of Locke (in The Nation, 1890): "When we think of the manner in which the Cartesians, Spinoza, and the others had been squeezing out the quintessence of blindness from 'First Principles,' and consider to what that method was capable of

lending itself, in religion and in politics, we cannot fail to acknowledge a superior element of truth in the practicality of Locke's thought" (in Ketner and Cook, eds., 1975: 95).

Lieber, at the time of the meetings of the Metaphysical Club, was nearing the end of his life. He had to his credit edited a 13 volume Encyclopedia Americana, had made major contributions to the study of criminology and had edited important works on American prisons by his friends deToqueville and deBeaumont. He had enjoyed widespread acclaim for his three major works: the Manual of Political Ethics (1838), the Legal and Political Hermeneutics of the same year, and for his most famous study, On Civil Liberty and Self-Government (1853). He had taught history and political economy for twenty years at South Carolina College, and in 1856 was offered a chair at Columbia College in history and political science. The years that followed this appointment caught Lieber up in the conflict between North and South and the Civil War. During this time he was a valued consultant for the War Department, and became one of the nation's foremost authorities on both domestic and international law. He was responsible for drawing up a code of the rules of war, which was adopted by countries in Europe as well as in the States. But although the first chair in constitutional history and public law had been created for him at Columbia College's Law School, it was not through his teaching abilities that Lieber was able to realize his ambition, which was "to leave a work behind me, be it ever so small, which will live in spite of the changes of time...." This he wrote to his friend Charles Sumner in the 1830's (Perry, 1882:82-83). Here he says that he will "...not rest until I force the political and legal world to quote me" (see Brown 1951:16-18).

And quote they did. Among the great tributes to Lieber was Elihu Root's Presidential Address at the Seventh Annual Meeting of the American Society of International Law, Washington, April 24, 1913 -- a year before Peirce's death, an ignominious death by contrast.

With a generosity almost extravagant Root cites the countless contributions Lieber made to the cause of international law, to the enormous wealth of literature on law, ethics, politics, that Lieber authored. Of his contributions to the Science of Signs Root says nothing, nor has anything yet been said on this aspect of Lieber's work. Root says of Lieber, "He was no dry student delving for knowledge he

could not use; but a living soul instinct with human sympathy and love of liberty and justice, seizing eagerly the weapons of learning to strike blows in the struggle for nobler and happier life among men." Of Lieber's life, Root says, "It was a wonderful career...If our Society, at once national and international, were about to choose a patron saint, and the roll were to be called, my voice for one would answer, 'Francis Lieber.'"

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THE LOGIC OF HISTORY AS A SEMIOTIC PROCESS OF QUESTION
AND ANSWER IN THE THOUGHT OF R. G. COLLINGWOOD

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John Locke (1690), in naming and chartering the then as yet non-existent science of Semiotic, which would treat of words and ideas in their own right, foretold that it would provide us with a logic and critic unlike anything hitherto known.

1. HISTORY AS A SEMIOTIC DISCIPLINE

R. G. Collingwood, the Oxford historian-philosopher (1889-1943), called for a new logic which would be adequate to historical thought. According to Collingwood historical thought is the type of thought characteristic of the contemporary Western mind, just as natural science was the predominating thought concern of the Renaissance and early modern mind which put pressure on the sixteenth century philosopher to articulate the logic of induction as its adequate logical procedure. The fragmentary glimpses which Collingwood gives us of his newly proposed logic show that it will be thoroughly semiotic in character.¹ It seems opportune both for semiotic and for history that at this nascent stage of the self unfolding consciousness of the semiotic movement some consideration be given to what Collingwood says about the semiotic process proper to the logic of history, which logic, he says (1946: 268-270, 273-275; 1939: 24-28, 124-126), is a logic of question and answer.

Collingwood maintains that all thought is basically historical. Scientific thought is always more or less conditioned by the prevailing state of scientific development, and is most properly understood if it is understood

in the historical context of that development.² The differences between Newtonian and Einsteinian physics cannot be meaningfully articulated except by introducing paraphysical principles, in this case specifically historical ones. It seems to me that the semiotic movement at its present stage of unfolding would profit enormously if it kept one eye on the very historical process itself, as it is happening, according to which it is unfolding and coming into being in its own right, attending to the way in which relevant questions arise, and how these questions are answered or modified or rejected in the process, and especially how the arising and answering of questions is conditioned and directed by the sundry contributions to the rich interdisciplinary context in which that development is taking place, which context, essentially historical in nature, is not accidental to, but rather a vital factor in, the successive moments of its emerging to a full understanding of itself.

II. KNOWLEDGE AS A QUESTION AND ANSWER PROCESS

Collingwood criticized Positivism and the realists of the school of John Cook Wilson for holding that knowledge consists in a mere registering of facts, and that "knowledge makes no difference to what is known" (1940: 146; 1924: 78; 1939: 44). Both reduce knowledge to a mere compresence of the mind with its object, in which compresence all the mind has to do by way of active participation is to favorably posture itself so as to passively register whatever facts or data are already there fully constituted in their own right to be objects of knowledge (1940: 177; 1939: 25-26). Collingwood says that their error is to totally ignore the mind's proper activity in the knowing process, namely that activity in which the mind is exercising its semiotic function of making data objectively meaningful. This activity is the activity of questioning. Knowledge is not a set of propositions asserting autonomous facts already fully constituted as facts independently of the mind's consideration (such as traditional logics regard knowledge to be), but of propositions taken together with the questions of which they are the answers and in relation to which they have their real meaning. Every integral act of knowledge is not merely a propositional assertion but an assertion taken in essential correlation with the question it is intended to answer (Collingwood, 1939: 26-27; 1924:

76-80). The propositions of Newtonian physics are meaningful as solutions to problems which arose within a context of thought recognizable as Newtonian. The Michelson-Morley experiment arose as a question put to reality within that Newtonian mindset, and it was upon that coherent mindset that that question depended for its relevance. The null answer to that question was not a normal answer which satisfied the eros of the mind, but a shattering of the whole semiotic foundation of that question. Literally it 'blew the mind' of the Newtonian physicist, inasmuch as the mindset of Newtonian fundamental principles had to be discarded. Newtonian physics was thus forced by an inevitable historical process to make way for a quite different mindset which would result in new and hitherto unforeseen ways of questioning and articulating the physical universe.

III. THE SEMIOTIC ROOT OF QUESTIONING: THE ACT OF SUPPOSING

Propositions, therefore, for Collingwood (1939: 30-31; 1946: 194-195), are basically historical in meaning, being, in the last analysis, answers to questions asked by investigators at a certain time and in a certain socio-historical context. And these questions arise as relevant questions by reason of that context.

But what makes a question arise relevantly in a given context? The question posed by the Michelson-Morley experiment arose with due relevance within the Newtonian framework, but the attempt to answer it reduced it to meaninglessness, together with the complex of conditions responsible for its relevance. The principle of relevance and of orderliness in the interrogation of data, whether it be the scientific interrogation of the physical world, or the interrogation of data of the human world, such as a detective investigating a crime, a judge and jury deciding on the guilt or innocence of an accused, or a historian wrestling with documents to decipher the past, is the particular mindset of the investigator, that complex web of mind-structure which, for Collingwood, is to be identified with the ego or self as a self structured in freedom, the freedom proper to the mind, which is its ability to stand distanced from fact and from reality by the process of supposing, which activity is at the foundation of the mind's activity of questioning. As a result of this unique activity there arises that mindset which both constitutes

the ego or self in its own order, and, at the same time, determines its ability and competence to interrogate its environing world (1924: 63, 76, 78).

IV. THE SEMIOTIC STRUCTURE OF MIND: ROLES OF ART AND RELIGION RESPECTIVELY IN REGARD TO THIS EGO-STRUCTURE

Following Hume, Collingwood denies that the mind is a substance underlying its acts; rather "mind is what it does" (1924: 222). The activity proper to mind, the activity which is the mind, is 'the raising and answering of questions' (1924: 77, 317), and, in doing this it builds up and structures 'itself and its world,' neither of which is meaningful except in relation to the other (1924: 248, 311). The ego structures itself as a self in semiotically co-structuring its world as an ordered meaningful whole in which it can freely deploy itself. Strains are introduced into the ego in its confrontation with its world when facts of the world are experienced to be incoherent with other facts already incorporated into the world structure. The ego is thus provoked to relieve this discord in its experience of its world by interrogating these intrusive facts as to their significance or meaning, that is, asking where do they fit into the world of patterned facts already assembled. Through questioning facts as to their meaning they are turned into significant or evident facts. This semiotic process of making the world "of reality" an amenable place to live in is the process of building up culture and civilization; its opposite is barbarism (1940: 197; 1943: 289-292, 307). It is essentially a process of raising and answering questions (1924: 317).

Summarizing the above, we may say that, according to Collingwood, there are two correlative poles to the integrally complete activity or semiosis of the human mind. These are the correlative activities of questioning and answering, whose basic natures respectively are the activities of supposing and asserting (1924: 77-79). In the 'mind world' couplet, supposing, the activity basic to questioning, is intimately tied up with the self-structuring of the ego, the development of that mindset which identifies a mind in its concrete makeup. On the other hand, but correlatively, the activity of asserting, the propositional assertion of facts in answer to questions, is intimately connected with the building up of the world as an environ-

ment favorable to the ego's self deployment.

Following Croce, Collingwood aligns the activity of supposing with that proper to the imagination, or rather, with the mind operating imaginatively, which, for Collingwood (as for Croce) is the same as the artistic activity of the mind. The activity proper to the artist is that of imaginative representation. His total involvement in expressing his artistic product is to express himself in that product. His individual work of art is for him his whole world and embodies, as such, the total expression of himself to himself. Artistic activity, imaginative representation, which permeates all higher activity of the mind, is a semiotic activity of ego-structuring, and is the exercise of an activity in which the mind has the power to freely disengage itself from the domination of its environment and, as a result, is able to confront that world in a dominating, questioning way, which, at the same time, is an exercise of freedom and of self-structuring. By supposing (imaginative representation), the mind can disengage itself from submission to "fact", thereby establishing itself semiotically as an autonomous self with a power of freedom in relation to its world (1924: 65, 76-80; 1964: 65-68).

On the other hand, Collingwood aligns the discovery of the activity of assertion of the truth of propositions to religion (1924: 110-114). Art is the discovery and disclosure of the self; religion is the discovery and disclosure of reality. By "reality" Collingwood means "the whole of that which is", the whole in which the multiplicity of facts of experience cohere and are thereby significant. Whereas the artist discovers (and loses) himself in isolated products of artistic expression, the religious mind recognizing that there is but one world in which all participate, and one who tries to live a purely artistic life, wrapped up totally in each of his isolated products as his whole world will sooner or later discover his misfortune of having competing claimants. His solipsistic world then has to be relinquished in favor of an objective, shared, real world (1924: 114-115).

Religion, however, remains infected with the error of art, since it imaginatively hypostatizes this infinite whole of that which is, the really real, over against the world of fact, the creator-God of the Credo of the Christian fathers and of Anselm's Ontological argument as understood

within the context of that Christian Credo. But with the evolved understanding of Anselm's God as 'that than which a greater cannot be thought' by such thinkers as Spinoza and Hegel, the 'whole of reality' previously set over imaginatively against the world of factual experience, is now understood to be an infinite whole inclusive of, and constituted by, the facts of experience in systematic coherence (1928: 137-144; 1933: 126).³ It is the concrete universal which is the principle of intelligibility of individual historical facts and 'the daily bread of every historian'. It is the universal which is at the basis of Collingwood's proposed new logic of question and answer, which, according to Collingwood, is the logic proper to history (1924: 196-197, 202, 220-221).

The whole life of the mind is thus one sustained activity of raising and answering questions, a continually recurring oscillation between supposing and questioning on the one hand and asserting and answering on the other hand, the systole and diastole, as it were, of the life of the mind (1924: 77, 317).

"Facts" arrived at as answers to previous questions now become presuppositions, part of the mind's structure, enfitting it for further questioning. But Collingwood says that not all the mind's presuppositions are acquired as a result of answering questions. Absolute presuppositions, as distinct from relative presuppositions which were previously answers to questions, are not "derived from 'experience', but are catalytic agents which the mind must bring out of its own resources to the manipulation of what is called 'experience', and the conversion of it into science and civilization" (1940: 29, 31-33, 197). That God exists, otherwise stated as that the world of fact forms an all inclusive coherent whole, is an absolute presupposition of science; it is not the result of a scientific investigation of the world, but a prerequired condition of the very possibility of meaningfully questioning the world in a scientific way.

If we consider the mind as a set of presuppositions, including both absolute and relative presuppositions, then, inasmuch as they form a coherent whole, or, as Collingwood himself expresses it (1940: 66), a "constellation of consumpionable presuppositions", we have more or less what Collingwood means by the human mind, not abstractly taken

but taken as it is at a determinate moment in its historical development. The mind of a Newtonian physicist is structured as a "constellation of consupponible presuppositions". This presuppositional mindset predetermines for such a physicist how the world should meaningfully present itself and how he himself should approach the world if he wants to put meaningful questions to it. Strains develop within the set of consupponible presuppositions when questions arising from that mindset are not met with appropriate answers from the world of factual experience. These strains may so increase that that mind complex is no longer consupponible (1940: 48, note to ch. 5). This is what happened as a result of the Michelson-Morley experiment in the history of physics.

The historical study of the various sets of presuppositions held by various peoples at various times, and the ways in which these complexes gave way to others under stress, is what Collingwood regards as Metaphysics (1940: 58-62).

V. THE SEMIOSIS OF DISCOVERY AND HISTORY

History, for Collingwood, is the account of the human mind's progressive activity of semiotically meeting and overcoming problems. And, conversely, the life of the mind is a succession of raising and answering of questions, which life, is basically of an historical nature, whether the questions be in art, science, religion, history or whatever. In the logic of such problem-solving the pertinent question to be asked is what is the mind's medium of demonstration in its inferential passage from the problem-provoking data to the as yet unknown solution. Faced with certain fragmentary data (a body slumped over a desk with a knife in the back, muddy footprints nearby and other isolated facts) a skilled investigator turns this data into implicatory evidence by the skilful way he puts questions to it (1946: 280-282). The medium of demonstration in this interrogative reasoning is nothing other than the investigator himself taken as a unique individual whole of structured subjectivity (1946: 279-280; cf. Polanyi, 1946: 40-41). This structure consists of certain axiomatic stances assumed by the investigator's mind as to how the facts are to be made meaningful in a world-whole (Collingwood's absolute presuppositions), and the accumulation and synthesis of the investigator's past experience (Collingwood's relative presuppositions). From this subjectivity-structure

there results in the investigator confronted with challenging facts the skill in supposing alternative possibilities (1924: 78) concretely embodied in specific questions whose alternative (supposed) possible answers will be checked out for verification by appeal to facts.

In discovery, where prescribed rules and methods are silent, as distinct from routine laboratory work, the investigator is 'on his own'. His judgement is ultimately determining and his reputation is 'on the line' each step of the way. He follows a directive principle inherent in his own consciousness, namely the dynamism of his structured mind towards reality as a coherent whole of parts or ordered facts (which coincides with Collingwood's mindset of consupponible presuppositions). The mindset of consupponible presuppositions confronted with the challenging facts of the particular case determines which questions arise first and which arise subsequently upon the answering of the first. One after another the supposed possible answers irreconcilable with the facts against which they are checked are eliminated until the facts whose assertion answers the questions are disclosed. Each answered question supplies the mind with an "intake of gas" which makes possible the "explosion in the cylinder" whose thrust is the next relevantly arising question (1946: 273). And so on it goes until the final solution is reached and all the facts are meaningfully 'in their place'. The more skilful an investigator is the less backtracking there will be from blind alleys and the more direct will be his logical path from the initial data to the final solution (Collingwood gives an example in 1946: 266-274).

In this interrogational building up of a concrete whole of facts which eventually supplies the solution to the problem, the investigator is simultaneously co-structuring himself and progressively increasing his power to dominate the world of facts by questioning them. Fidelity to this semiotic tension of consciousness in search of integrity and wholeness in the facts of experience, which is at the same time a semiotic tendency to that inner subjective integrity and wholeness of the true self, is the only lodestone which the researcher, or historian, or crime investigator, or problem-solver has to follow in cutting new pathways where none are already provided (1924: 248; cf. Polanyi, 1946: 24, 32).

NOTES

1. See, for example, Collingwood, 1946: 249-282, for what is perhaps his most direct and lengthy treatment of his proposed logic of history.

2. "Descartes meant what he said: and what he said was that the concrete historical fact, the fact of my actual present awareness, was the root of science . . . Science presupposes history and can never get behind history; that is the discovery which Descartes' formula is the deepest and most fruitful expression. This discovery implicitly resolves science into history" (Collingwood, 1924: 202; see further 1939: 62-63, 72).

3. "If the proposition that God exists is a metaphysical proposition it must be understood as carrying with it the metaphysical rubric; and as so understood what it asserts is that as a matter of historical fact a certain absolute presupposition . . . is or has been made by natural science . . . at a certain phase in its history" (Collingwood, 1933: 187). On the treatment of the existence of God and the Anselmian Ontological argument by Collingwood in his Essay on Metaphysics, Lionel Rubinoff (in M. Krausz Critical Essays on the Philosophy of R. G. Collingwood, London: Oxford University Press, 1972, p. 133) has this to say: "Belief in a monotheistic God, Collingwood argues, is the same as belief in a unitary world (or whole) and this is the fundamental belief of science and has been since the twelfth century. It is the belief that nature is a single intelligible system ordered according to systematic laws in the light of which particular events and existences can be explained rationally. Such a complete and unitary system is the absolute whole or what even Kant recognized as the Ideal of Reason and admitted to be a theoretical condition of all coherent science - the ultimate presupposition of all experience conditioned by the categories of the understanding. As Collingwood had said earlier, it is the metaphysical conception of God, Spinoza's Substantia sive Natura, and Hegel's Absolute. The existence of such a God is no matter of fact and of course it cannot be empirically demonstrated: but it must be presupposed, for otherwise nothing could be empirically demonstrated at all. The presupposition is an act of faith upon which all scientific understanding rests". In relation to science 'That God exists' is a presupposition, but in philosophy the Ansel-

mian argument categorically asserts the existence of the subject matter of philosophy, namely the whole of that which is, or, in Anselm's words: 'that than which a greater cannot be thought'. In his Essay on Philosophical Method, 1933: 134, Collingwood says that "(t)his view of philosophy as categorical thinking, even apart from its agreement with the pronouncements of philosophers, its connection with the argument of the Ontological Proof, and its verification in the actual procedure of the philosophical sciences, is a necessary consequence of the overlap of classes, and therefore follows from the hypothesis of the present essay. Categorical and hypothetical are two species of judgement; according to the hypothesis, therefore, in nonphilosophical judgements they will constitute separate classes, so that the universal judgements forming the body of science can be purely hypothetical; in philosophical judgements they will overlap, so that those forming the body of philosophy cannot be merely hypothetical but must be at the same time categorical".

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V. SEMIOTICS AND LINGUISTICS

THE SEMIOTIC PARADIGM AND LANGUAGE CHANGE

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The considerable contribution of contemporary linguistics to semiotics is well known, and the influence of the linguistic paradigm in semiotic investigations is equally well-documented. However, the reverse direction, that of the effects of current semiotic methods on linguistic method is hardly a concept. This seems rather incongruous, since the contemporary period of these two disciplines dates from the end of the last century with Saussure, who was both a linguist and a semiotist, and it has been continually nurtured throughout this century by Jakobson and others, who are equally at home in linguistics and semiotics. Yet, slight indications of the consistent intervention of the semiotic paradigm in behalf of hard linguistic data, in particular that involved in explaining language change, have been delayed until now, the final quarter of this century.

The purpose of this paper is to examine the question of precisely what semiotics can do for linguistics, that is, a semiotic linguistics. Two semiotic principles dominate the recent application of semiotic theory to linguistic change: iconicity and abduction. The type of iconicity involved is not imaginal, but rather it is the extremely intricate diagrammatic iconism, viz. similarities are postulated between form and meaning based on the relations of their parts. The cornerstone of diagrammatic iconism is the time-honored principle of isomorphism, biuniqueness, "one form: one meaning," which Theo Vennemann (in Schuchardt, the Neogrammarians and the Transformational Theory of Phonological Change, ed. T. Vennemann and T. Wilbur, Frankfurt/M. 1972:184) renames "Humboldt's Universal," stating "Suppletion is undesirable,

uniformity of linguistic symbolization is desirable: Both roots and grammatical markers should be unique and constant." Michael Shapiro in his article on "Russian Conjugation: Theory and Hermeneutic" (Language 1980) gives several excellent examples of linguistic diagrammatic iconism. One of these is his "explication," not mere "description" or "rule formulation" (67), of the verb desinences of the Russian non-preterite indicative as displayed in the paradigm for v'od 'lead' and l'et'é 'fly':

<u>p.</u>	<u>sg.</u>	<u>pl.</u>
1	v'od'- <u>ú</u>	v'od'- <u>óm</u>
2	v'od'- <u>óš</u>	v'od'- <u>ót'e</u>
3	v'od'- <u>ót</u>	v'od'- <u>út</u>
1	l'et'- <u>ú</u>	l'et'- <u>im</u>
2	l'et'- <u>iš</u>	l'et'- <u>it'e</u>
3	l'et'- <u>it</u>	l'et'- <u>át</u>

The oppositions defining the desinences are for person (p.): third person equals unmarked (U), that is, impersonal; first and second persons equal marked (M), that is, personal; of the first and second persons, the first person is again marked. For number the singular (sg.) is unmarked, the plural (pl.) marked yielding:

<u>p.</u>	<u>sg.</u>	<u>pl.</u>
1 MM	U	M
2 M	U	M
3 U	U	M

Accordingly, the first person singular ú-ending incorporates the highest degree of deflection for the marked person category with unmarked number, while the third person plural ending incorporates the maximally marked number category with unmarked person. The greatest differentiation between person and number value is in the first person singular, followed by the third person plural. This distinction in content is then mirrored conversely in the forms, where the -ú of the first person singular desinence is highly underdifferentiated, the -út of the third plural less so, and the remaining desinences are least underdifferentiated.

We can now use the differences shown (in the paradigm

above) between v'od 'lead' of the First Conjugation and l'et'é 'fly' of the Second Conjugation for a second case in markedness complementarity. Shapiro holds that stems ending in a vowel are unmarked (l'et'é), those ending in a consonant are marked (v'od). The conjugation which a stem follows is seen also in the stem final consonant. Those with [+sharp] consonants belong to the Second Conjugation; they are i, e, cā- stems. Those with [-sharp] consonants belong to the First Conjugation; they are consonant, u, a, o- stems. By the principle of markedness complementarity then, the [+sharp] consonant stems are [+marked] at the phonological feature level, but [-marked] as a conjugation paradigm, while the [-sharp] consonant feature correlates with the [+marked] conjugation paradigm. Again we witness an inverse correlation. It would be folly to hold that the iconic principle is an explanation for all linguistic relations, or as Shapiro claims for "why the data cohere as signs" (91). The principle is a working hypothesis, not a proof.

It is precisely the purpose of John Haiman in his Language article of the same year (1980) "The Iconicity of Grammar: Isomorphism and Motivation" to underscore, on the one hand, the power of isomorphism, while on the other hand, show that it is but "nearly universal" (515). Haiman aims to account for homonymy, which is impossible, just as is synonymy, under the principle of biuniqueness. He is unable to explain the anticipatory subject morpheme on the medial verb in Hua, a Papuan language of Eastern New Guinea, through isomorphism because the morpheme in question has one invariant form with three different meanings. Accordingly, Haiman seeks an answer outside of isomorphism and he finds it in the universal principles of coreference, subject-verb agreement, and the nominal character of medial verbs. Haiman writes that such "principles ... are universal, and override bi-unique correspondence or isomorphism wherever they conflict with it" (519). In fact, he claims then, that "The value of the iconic assumption lies in the impetus it provides toward the discovery of such (otherwise unnoted) principles." This view differs then considerably from that of Shapiro (above), for whom the value of iconicity in coherence between sign and meaning lies in its hermeneutic force.

The second semiotic principle that dominates the recent applications of semiotic theory to linguistic change is abduction, which represents Firstness and hence iconicity as well. The unique value of abduction is that it renders

innovation, which albeit is only possible, not certain and therefore represents Firstness. Thus, for example, Eng. winned as past tense to the verb win, built on analogy to the past of, for example, the verb pin, while it is an innovation, is nevertheless an error. Yet, obviously, innumerable abductions from every day occurrences to language, to scientific inquiry, have resulted in correct insights.

Since abduction results in innovation, it is not surprising that Henning Andersen attempted to incorporate Peirce's inferential patterns into language change. Being another of Jakobson's linguistic progeny, we can expect the Andersen data to be from Slavic once more. In his article "Abductive and Deductive Change" (*Language* 1973) Andersen speaks to the replacement of the sharpened labials /p^hb^hm/ by the dentals /t^hd^hn/ in the Litomyšl dialect of Czech during the fourteenth century, with their subsequent reversion to plain labials in the nineteenth century. For convenience he refers to the innovators as Tetak speakers with initial t for the Czech pjet 'five', as contrasted then with the Petak speakers. Andersen, rejecting all previous explanations for the actualization of these changes, claims that the Peircean model of abduction can account for both transformations. In the fourteenth century, Tetak speech evolved through indeterminacy (ambiguities) in the production and the perception of the sharpened labials. The language learners (younger generation) with underlying dentals accommodate the gradually receding surface labials by means of an adaptive rule of t > p in formal style or older-generation style. Gradually this adaptive rule is lost. For Andersen the loss of the sharpened labials to dentals occurs by abductive inference. Similarly, Andersen appeals to abduction in explaining the nineteenth century return of the dentals to plain labials. The triggering mechanism is not phonological ambiguity, but rather borrowing or influence from the neighboring prestigious Petak dialects. In this instance, an adaptive rule of the sort p > t would compensate to retain doublets at least until that time when the socially preferred labials limit the Tetak peculiarities to the older and finally passing generation.

We observe that the nineteenth century change has absolutely no structural effect on the Tetak phonological component. It amounts to a few more labial occurrences in the labial inventory. Many linguists would not consider it as linguistic change per se. Concerning the fourteenth century abduction, Andersen writes on the one hand, "It is the reinter-

pretation of the phonological structure that motivates a phonetic innovation" (780), and on the other hand, "it is motivated by ambiguities in the corpus of utterances from which (the innovation) is inferred" (774). Although the first statement emphasizes the perception and the second the production of ambiguities, both statements underscore the inferential process as accountable for the change. In fact, Andersen writes: "the conception of language acquisition assumed for our model of phonological change involves processes that are basic to all activities of the human mind" (778).

This is exactly the point for parting company with Andersen in considering abduction as any sort of cause for linguistic change. Obviously processes which are fundamental to all activities of the human mind are a necessary ingredient in language change; indeed, this includes the unsuccessful analogy winned as preterite to win as well as all successful analogies, since they are abductions. Accordingly, analogy in and of itself can never be the efficient cause of a linguistic change.

A factor in analogy, or in the case of the Tetak change, a factor in the phonological ambiguity, must be sought as the compelling reason, the Secondness, in which the Tetak dentals have their existence. We find this factor within the minor premise of the abductive inference. It is a purely linguistic one, completely obvious, namely, the Tetak sharpened labial was at least 51% dental acoustically and physiologically, that is, the sharpened labials were, so to speak, more acute than grave. Spectrographically, the second formant was raised from the first, the mouth cavity was narrowed by the advancement of the tongue toward the alveolar ridge and the teeth, with the accompanying dilation of the pharyngeal cavity. In the light of this phonological reality and related facts such as vowel palatalization, which is more common to Czech than any other Slavonic language, it is all the more surprising that Andersen dismisses outright Roman Jakobson's (Selected Writings I, The Hague 1962:275) consideration of the Tetak change as a case of regressive assimilation. Andersen's abductive change concept is mere redundancy; his abductive model is only of value as causation in the Tetak change if we require the dynamic of Secondness within the abduction and seek to identify it.

The same criticism may be levied against Raimo Anttila's

(An Introduction to Historical and Comparative Linguistics, New York 1972) interpretation of the paradigm of the Latin word meaning 'voice', wōk- / wōkw-, which regularizes in favor of wōk- (the nominative), instead of the oblique cases, wōkw-, as would normally be Latin habit. Anttila (95) cites This as an example of "... the irregularity of analogy (one cannot predict the direction)," while observing that the change is regular in itself, since Latin prohibits interconsonantal w which would result in the impermissible *wōkws. To be sure, the analogy is then perfectly predictable after all, because of the purely phonological compulsion, the Secondness, prohibiting w between consonants. It could not be otherwise.

As a final example of the application of the semiotic principle of Secondness for the successful determination of the teleology of a language change, let us turn to an ongoing linguistic change in American English. In his 1970 Language article "Aspect and Variant Inflection in English Verbs", Randolph Quirk discusses the results of a series of tests used to substantiate his hypothesis that in both British and American English the so-called irregular weak verbs display, on the one hand, a voiceless dental inflection to signal perfective aspect and, on the other hand, a voiced dental inflection to signal imperfective aspect, for example spilt in "When I shouted, he spilt his coffee" versus spilled in "The water spilled out all day until the ceiling gave way." Quirk is convinced that the results of his experiments corroborate a speaker distinction between perfective -t and imperfective -ed, which are associated with the past participle and preterite, respectively, and that in fact, he writes, (3, 10) "we might infer a corresponding direction of analogical influence," i.e., the participial -t penetrates the preterite paradigm. Anyone familiar with Quirk's article is aware of the tenuousness of his results, which prompts him to invoke even diachronic Middle English data, lending some support to the claim of analogical influence of the participle upon the preterite.

It is surprising, however, that Quirk's experiments consider only written data and only the dental suffix, to the complete neglect of the accompanying vowel alternation which occurs in three of the eight verbs included in his results: dreamt, leapt, knelt, beside spoilt, spilt, learnt, spelt, burnt. (Quirk excludes smell and lean on the basis of poor test design and we will accordingly exclude them as well.)

When Quirk's data (305 Fig. 2a, 2b; 309 Fig. 4a, 4b) are studied with a view toward the vowel alternation, a clear-cut correlation between non-alternating root and suffix -d, and alternating root and suffix -t emerges. This correlation is particularly strong in American English in which, using Quirk's statistics, dreamed, leaped, kneeled can be found to be more objectionable than spoiled, spilled, learned and burned in the -ed perfect (Fig. 2a -- most objectionable: kneeled 20%, dreamed 18%, leaped 12%; spelled 12% and all others less than 12%). In the -ed preterite dreamed and kneeled are the most objectionable, while leaped joins the non-alternating group (Fig. 4a -- most objectionable: kneeled 15%, dreamed 12%; all others less than 12%, leaped 4%). Conversely, knelt, dreamt, and leapt are, but for spoilt, the least objectionable of the eight verbs in t-perfect (Fig. 2b -- least objectionable: knelt 27%, dreamt 39%, leapt 51%; except spoilt 47%, all others more than 51%); and, with the exception of burnt, the verbs knelt, dreamt, and leapt are also the least objected to in the t-preterite (Fig. 4b -- least objectionable: knelt 17%, leapt 38%, dreamt 51%; except burnt 40%, all others more than 50%).

Of the three root alternating verbs, the order of objectionability to -ed suffix from least to most in both the perfect and preterite is leaped, dreamed, kneeled; correspondingly the reverse order might be expected for the t-suffix, and this is, in fact, the case in the perfect, thus least objectionable knelt, then dreamt, and most objectionable leapt. In the t-preterite, dreamt and leapt change places, thus least objectionable knelt, then leapt, and most objectionable dreamt.

From these observations we may draw two conclusions which have been completely missed by Quirk. In addition they afford us eye-witness evidence of a Firstness relation in contrast with a Secondness relation. The association of the t-suffix with the alternating root, regardless of whether the suffix signals tense, or aspect, or both, is accountable at least in part for the spread of the t- suffix (thus, e.g., knelt is a relatively late alternate, nineteenth century, as compared to the fourteenth century dreamt and leapt). The association of t with an alternated vowel is merely possibility. Nothing in either the root vowel nor the suffix requires their togetherness, accordingly Firstness functions here. The t-suffix relative to the verb leap, however, is in Secondness relationship, that is, by natural phonological rule,

regardless of the spelling, the voiceless dental alone is possible when contiguous to a root in voiceless consonant. It is a necessary, compulsory association accountable for the maverick acceptability of leap in the Quirk experiments. The neutralization of the -ed and -t suffixes with leap accounts for leap, so to speak fence-sitting between -t and -ed acceptability, or indeed joining the non-alternating roots in the perfect, have leaped, have leapt, as well as in the preterite imperfective leaped. At the same time, the unambiguous alliance of leapt in the preterite perfective (where leapt in fact is less objectionable than dreamt) corroborates the neutralization of -t, -ed by showing that the onus of the distinction between leaped and leapt in the preterite resides in the alternating root alone. Ultimately this too will be the case for the rest of the leap paradigm, that is, aspect will reside in the vowel alternation, not in the suffix. Quirk's analogy to participial -t greatly underestimates the strategies at work here. And obviously the indexical relationship by far outmaneuvers the iconic one.

In conclusion we can claim that the application of the Secondness principle from the semiotic paradigm is found to yield hitherto unobserved factors in linguistic causation theory. This represents (1) a serious challenge to the belief of some linguists that "Linguists currently have little idea what causes language change" (A. Akmajian, R. A. Demers, R. M. Harnish: Linguistics: An Introduction to Language and Communication, Cambridge, Mass. 1979:216) and (2) it represents a strong indication of the maturation of a semiotic linguistics of language change.

WHAT'S IN A WORD?

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Let us start out with a few more-or-less real-life occurrences.

Someone asks you for a five-syllable word meaning 'unending,' and you respond with 'interminable.'

You write a piece of doggerel in which you rhyme Firth with mirth.

You do a crossword puzzle involving a five-letter-word for 'ancient viol.'

Finally, you are with me when I take Bob Binnick (of the University of Toronto) for dinner to a seafood restaurant in Jacksonville, Florida. On display -- as a part of the decor -- are several long pointed objects and one shaped a bit like the things used to remove ice from northern sidewalks in February.

'Do you know what that is?' I enquire. 'I don't know what that is ... a flensing tool,' Binnick responds.

In each of these instances a piece of material has been located in the vast word-hoard each of us carries about. And in each of these instances the access has been executed in a different way: through synonymy and syllabification; through rhyme; through semantics and orthography; through visual image.

There have been a variety of views of the internal or

mental lexicon over the past decades (see Salus to appear); what I would like to look at here, however, is the nature of the individual entry -- the lexical item or 'word.'

Over the past twenty-odd years, there have been three main ways of examining lexical contents: featural analyses, semantic differentials, and componential analyses. Most recently, there have been models founded in artificial intelligence and computer theory adduced.

Featural analyses are based on the notion that meanings (whatever they might be) are analyzable into a finite number of elements, like phonological segments into distinctive features of a phonetic nature, and that meanings within natural languages can be differentiated on the basis of these reductionist feature distinctions.

While all of us can agree that /p/ and /b/ differ solely in the feature known as [VOICE], and that 'man' and 'woman,' or 'boy' and 'girl,' or 'doe' and 'stag' differ in a feature labelling biological gender, it is much more difficult to imagine the putatively universal features we might employ in differentiating the 'Ayatollah' from the 'Shah,' or 'Mali' from 'Zaire,' or, for that matter, 'trot' from 'lope' from 'canter' from 'gallop' from 'run.' Difficulties in finding universal features with some utility have driven researchers to such *ad hoc* formulations as "+ROOF TO STREET EXTENT" (Keil 1979). Even such a cursory examination as this discloses that a featural analysis of meaning must lead us into a list of features nearly as extensive as the lexical items these features are intended to represent.

Semantic differentials involve the fact that the meanings of words are not fixed in the synchronic firmament, but are embedded in a subjective matrix of affective dimensions. Osgood and his colleagues have done a vast number of experiments, using a seven-point scale, evaluating the subjective placement of such items as wise-foolish, good-bad, deep-shallow, etc., and even such items as skittish and lightheaded. Their results are illustrated on a three-dimensional plot of the factors Evaluation, Potency, and Activity. Despite the fact that there is no evidence that such structures exist for functional words, Osgood (Osgood et al. 1957) has made claims for the ways in which the meanings of words interrelate within the mind. Again, it does not seem to me that the factors used can delimit the meanings contained in the internal lexi-

con, though these factors are useful in judging how some portions of the lexicon interact, and where the involuntary un- or subconscious connotational biases are.

Perhaps the best instances of componential analyses can be found in the work of Miller and Johnson-Laird (1976). To a certain extent, the componential analysis approach may be derived from the featural approach, for the "components" of a word may be thought of as the structural atoms of that word. As Dwight Bolinger has remarked (1975:193), dictionary makers have struggled with this problem for centuries, for 'It is obviously to their interest to reduce the meanings of words to the simplest possible terms consistent with what they can expect from their readers.' The specific kind of analysis discussed by Miller and Johnson-Laird is that of lexical decomposition. I find the sort of thing they do 'neat,' but it does not match well with reality. If we look at the word associations to the word hand in the literature, and try to match them with the theoretical decomposition of hand, we find that there is no overlap whatsoever. Moreover, while Miller and Johnson-Laird talk of the lexical decomposition of the 'verb' hand, the word as an isolated stimulus elicits both verbal and nominal responses -- but not the verbal responses Miller and Johnson-Laird appear to believe ought to be elicited.

Over 15 years ago, Chomsky stated that 'A lexical entry can now be regarded simply as ... a set of features, some syntactic, some phonological, some semantic ...' (1965:214). More recent approaches to the lexical item have acknowledged the various types of material -- or at least some of the types -- which must be contained within the item, but have failed to come to grips with the vast range of normal and pathological phenomena in attempting to describe the nature of the lexical item.

It is nearly two decades since John Carroll and his colleagues set out to classify the responses to standard word-association tests (Carroll et al. 1962). They pointed out that about two thirds of all the responses to word association requests were with opposites, and that most of the remainder were so varied as to be unclassifiable. Presumably the contents of the lexical item are closely tied to the item's opposite, whether a contrary, a contradictory, or a converse.

In many cases of aphasia, brain trauma with loss of some or all language faculties, the victim 'merely' loses control over his or her lexicon: the appropriate words just aren't there. Yet in a large number of cases, some word recognition must be present. Let me offer but two examples:

First, in the Boston VA Hospital naming task there is a picture of a pelican. Among the many responses to this stimulus are such items as 'duck,' 'swan,' 'gull,' 'seagull,' and 'platypus.' One might postulate that these are birds associated with the littoral ... for the most part. That most of them are totipalmate. But what of the platypus? Certainly, if our semantic structures were strung like Christmas lights at the ends of the branches of a structural tree, mammals and birds would be widely separated. Even egg-laying mammals aren't birds. But a platypus may be associated with river banks; it has webbed feet; it lays eggs; it has a broad beak, much like a duck. And the general classification it comes under seems to be one that lumps these aspects into something quite similar to those associated with birds of the littoral.

Second. In an excellent article in Brain and Language, Brian Butterworth (1979) described some attempts at naming objects on the part of a jargon aphasic. One of the objects shown him was a pair of scissors. The aphasic said:

Yes, I know those. I know tho- I had them.
A week or so before, sir, there they are sir,
two. Maitreks. You get the one one and the
smaller one. Rather larger smaller. And
then the two waitreks. Would you become
with the. Vice. The voit of er. Swi'n thing.
Ax. To dizid the thing as it is.
[transcription modified - PHS]

Yes, this jargon aphasic knows what these are: there are two, larger and smaller -- we can supply blades; they're like an axe, in that we divide (=cut) things with them; there are two parts like a vise -- the jaws of which hold, rather than cut. Yes, the aphasic certainly knew that they were a pair of scissors, even if he could not name them as such. Part of the entry was unavailable.

Freud, in his brilliant monograph on aphasia, remarks that the symptoms of paraphasia are merely the symptoms we

all evidence when drunk or overtired or when our attention is divided. And certainly we all lose words (temporarily) in the way this jargon aphasic has: we can tell about the item the name of which we're seeking, but we've lost that name.

We all know that we can rhyme and alliterate words; that we can find words of n syllables; that we can find synonyms and antonyms; that we can name images and describe the things words represent.

This means that the lexical item, the entry in the internal lexicon, must be far more like the entry in an encyclopedia than the entry in a dictionary. And this encyclopedic entry contains phonological information, including both segmental information and syllabification and stress; it contains synonyms and antonyms; it contains an image or images of the thing or activity. Items must also contain syntactic information, not merely the indication of noun, verb, etc. The syntactic information must be quite elaborate, so that we all know that the pronoun which substitutes for inanimate nouns in English is 'it,' but that some inanimate nouns, like aquatic vessels are marked feminine and so the appropriate pronoun is 'she.'

But this is really not enough. For we must explain what happens when we solve crossword puzzles: a five-letter word for ancient viol; a four-letter sarong's cousin; a plural numeral that has an 's' at the end, an 'i' in second position, and has five letters; all require us to carry the orthographic representation of an item as well. Do you know an animal that begins with 'Z' could only be answered if this were true.

Unfortunately, this is still insufficient. Bob Binnick's behavior in Jacksonville means that he absorbed the description of a flensing tool from Moby-Dick, stored the word and the image, and that confronted by the visual image of something he had read about, he could access it.

It might be that this would seem like enough. The encyclopedia entry for each item now contains the pronunciation, the meaning, the spelling, the image, and syntactic use of that item. But there are other things, too.

Along with 'dog' in my head are the facts that I had a cocker spaniel as a child; that I once bought a pug from

Terry Langendoen; Rin-Tin-Tin and Lassie are there; Old Dog Tray; the Georgia football team; and a thousand (more or less) other facts. Literary allusions are a good demonstration of this; so are puns; so are anecdotes. There would be no point in an allusion or an anecdote that was impenetrable.

One of the proofs of the immense complexity of the entry and the multiplicity of ways in which we can gain access to it is the ability to find things in strange ways: several years ago, driving in Massachusetts, my wife and I passed a sign for the Wayside Inn. My wife asked why all the local authors had three names. Henry Wadsworth Longfellow, Ralph Waldo Emerson, Louisa May Alcott, Henry David Thoreau, Harriet Beecher Stowe. We started to introspect as to what had come to pass: the roadsign had gone to the 'Tales of a Wayside Inn' which had led to Longfellow. Presumably that led to either Walden Pond, Thoreau and Emerson, or to New England authors of the nineteenth century. And thence to the fact that their names were marked. But then what of Edgar Allen Poe, of Edna St. Vincent Millay, of Elizabeth Barrett Browning? For how long can one go on hunting up three-name authors?

The lexical entry is more complicated than Chomsky thought it was, by far. Just how complicated can be seen from the types of material that must be stored together in order for phenomena to occur which we experience every day.

But the wonder is not so much of the quantity and variety of material in each of the encyclopedia's entries, as of the ways in which we can access the material. It is not merely that many of us have an entry for Karel Capek as the author of R.U.R.; it is that we can find the play under some heading like science fiction or robots and the author under Czech playwrights as well. We might even find The Insect Play there as well, or the name of Capek's brother.

In the Prolog to Henry V, Shakespeare packs the world into his wooden O. It seems as though we can get to the world through every word we have. What's in a word? Why, everything.

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VI. LITERARY AND ARTISTIC SEMIOTICS

FUNCTIONS OF THE INDEX IN NARRATIVE: AN OUTLINE

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Embracing a nearly infinite range of structural possibilities within the realm of fictional narrative, the novel is probably the most heterogeneous verbal art form available to the creative writer. Yet the challenge to the writer remains uniform: to involve and intrigue the reader, and thereby assure his continued contemplation of the work. In his "Notes on the Novel," Ortego y Gasset concludes that art makes possible the "enjoyment of contemplation" (1968:82-83). How this might be achieved defines in large measure the challenge to the maker of verbal art. Similarly, but from the opposite perspective, in regarding the finished product the literary critic attempts to gauge the nature and depth of the achievement--itself a challenging task, since the counterpart activity to literary creation--reading--is largely a subjective, even private matter, which does not easily lend itself to the identification of universals.

Such sub-genres as the mystery or adventure novel attempt to assure the reader's further contemplation through the maintenance of suspense and the manufacture of surprise. By contrast, the Russian nineteenth-century novel, with its frequent primary emphasis on the development of character rather than plot, offers another kind of intrigue to inspire reader interest (and may call for another kind of reader altogether). One method by which the reader's continued attention is maintained involves the reorganization of the chronological order, allowing for information to be withheld or advanced according to the writer's strategy for telling the tale. In highly delimited fashion, the present study

will attempt to outline a model which would encompass the architectonics of the conventional or "traditional" novel, where, among other things, a fairly standard utilization of chronology is an important constitutive factor.

Perhaps the least complex novelistic structure comprises a series of episodes presented in ordered chronological sequence, where the first leads to or generates the second; that one, the next; and so forth from beginning to end, as in the common adventure tale or picaresque. In such fictional works, time follows the same linear pattern as it does in life--but with this difference: the conventional work of fiction requires some form of motivation to make the sequence of events comprehensible and credible.

In his discussion of "Thematics," Boris Tomaševskij, for example, argues in effect that motivation (motivirovka) be regarded as an essential feature of plot construction (1928:144-152). Texts ordered according to a causal-chronological pattern must provide then, a "cause" for later "effects" (or future developments). In brief, the series of events must be clearly motivated in order that the plot be generated; a more or less believable rationale for what has already occurred is thus the prerequisite for what follows. In purely chronological terms, such works may begin with either the purported past or present, but in either case, will follow its own predetermined system by which past yields to present and ultimately to future, with virtually no accommodation made for any interruption of the prescribed sequence of events. Everything is thus chronologically linear, presumably logical, and relatively simple. Events proceed exclusively in syntagmatic fashion along the synchronic-diachronic axis, upon which every text can theoretically be plotted, regardless of its complexity (by extending to practical application Jakobson's now famous dictum: "The poetic function projects the principle of equivalence from the axis of selection into the axis of combination." 1964: 358).

In contrast to the relatively simple causal-chronological sequence of events, a text may be ordered according to an inverted chronological system, which does not simply range in a straightforward, linear progression along the syntagmatic axis, as in the prior instance, but allows for references to both past and future events to be incorporated within its

overall temporal framework--which implies, then, a shift towards the diachronic domain. Yet works characterized by a more complex chronological stucturation, as well as those related in simple causal-sequential fashion, will in any case adhere, as a matter of course, to certain basic temporal constraints imposed by the very nature of this axis; in other words, by time itself. Hence, there is bound to be some point in time from which the action issues and a moment when it all comes to rest--regardless of possible countless references to centuries past prior to the novel's opening episodes, or to the dim future, whose events are never to be portrayed within the work's temporal framework. Furthermore, all such references are bound to be made--by either character or narrator--within the context of those present events, which the plot proper is concerned to depict. There must be some connection or linkage, in other words, between episodes which are part of some other time frame and the novel's current events of which the main plot consists.

Within a whole spectrum of possibility, repeated references to both past and future may punctuate the "present" narrative, interrupting it to provide more information, allow for greater anticipation, or generate further action. Related in seemingly convoluted chronological fashion, the plot may thus be interrupted to allow for a change in perspective from (a) present to past, or from (b) present to the distant (rather than immediate) future, and ultimately, from (c) either past or future back to present. Thus, texts governed by inverted chronologies allow, by definition, for a displacement in chronology.

(a) A work's retrospective views may be expected to either partially or fully eliminate the lacunae in the reader's knowledge of those past episodes to which the characters and their respective stories are linked, as in the mystery novel, for example, where all "current" efforts are directed at unraveling what happened previously. Such references to the past may be considered to offer information bearing "regressive relevance," which allows the reader to better comprehend what is yet to unfold.

(b) By contrast, references to the future can only be speculative, if the common conventions of the novel are to be adhered to; namely, that neither characters nor narrator be granted totally accurate or totally revealing foresight.

For if either be allowed such detailed prophetic vision, all suspense would of course, be eliminated. A work will thus offer only occasional prefigurements of what is yet-to-be as purely anticipatory. However, such references to the future may also bear "progressive significance," which thereby generates more story as well.

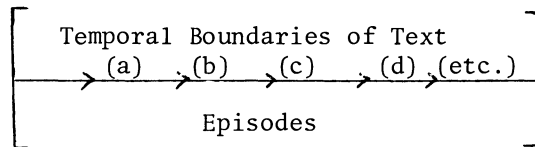
(c) Finally, any transition from either past or future to present implies simply the resumption--for whatever designated period--of the plot proper. Such transition, in effect, returns the work to the more fundamental causal-sequential pattern, which will inevitably govern at least some passages within a given text.

Broadly and abstractly considered at this point, all such time-oriented references are to be viewed as indexical in nature, since they reveal the interconnections and linkages which, on one level, make the intricacies of plot both comprehensible and credible, while, on another, are themselves the material from which the story is made. For the various linkages are not simply indicated by indexical signs but are themselves composed of such signs. Conversely, and in different terms, the conventional notion of the "motif" (defined by Tomasevskij as "irreducible, the smallest particles of thematic material," and as those which "form the thematic bonds of the work" 1928:136-37) is, at the same time, both an element of plot and an indexical sign interconnected with--and pointing to--further plot developments.

Whether the text be ordered in causal-sequential manner or according to some inverted chronological system, the fictional narrative is to be conceived as being composed of a series of time-oriented indexical signs. For in the case of the former system, where each event motivates the next, such motivation is indicative (no matter how subtly) of what is to come--a feature which may only become evident, however, once the reader has reached that point in the text which affords him the necessary perspective to recognize the fact. With regard to the latter, more complex system, transitions from (a) present to past, or from (b) present to (distant) future may bear respectively, as has been noted, regressive relevance or progressive significance, which jointly represent--through the novelist's carefully devised manipulation of time--an intricate device by which the reader's interest is held and the story told.

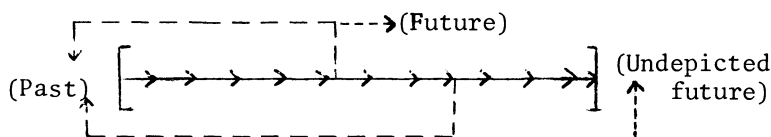
Having made certain basic preliminary observations, it remains to place them within the context of a broader conceptual framework. To this end, the existence within a given text of three possible narrative planes embracing five distinct interior structures is to be posited. Of these, only the first need exist as the absolute requisite for the realization of the tale. Yet all three possible planes are understood to function within a text which is itself delimited by specific spatial and temporal bounds, and whose main, substantive account, therefore, is depicted as taking place within certain locales, to the exclusion of others (also described in the text), and within a particular temporal framework, no matter how idiosyncratically defined. In an effort to outline basic time-oriented functional aspects of the indexical sign, the concern here will remain limited to the text's temporal designs.

1. First in importance, the "plot proper" is to be identified with a hypothetical primary plane of the text--and the one essential to its formation and existence. Recounting those episodes which are to be understood as taking place contemporaneously, as it were, with their presentation to the reader, it relates the story's present events. When this one plane is evident to the exclusion of all others--and therefore, bears the burden of rendering the entire account in chronological sequence--the structure specifies a causal-sequential form of plot construction essentially equivalent to the Formalist conception of *fabula* (Tomaševskij 1928:134-36), which may be conceptualized in the simple form as diagrammed here.

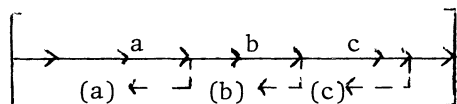


2. Second, there may be one or more "non-sequential references" to the past with possible further interconnected references to the future. As past-oriented accounts, they are conceived as being situated beyond the temporal bounds of the plot proper. When coupled with a future-oriented correlative, they remain again, out of sequence, conceivably extending into some never-to-be depicted future domain.¹ In general, instances occur when the writer interrupts the story to present his hero's genealogy or some "unknown" episode in his past--perhaps to have some bearing on his future, or when

he provides a "historical," contextual basis for an account which is later to follow. Such a series of references makes for a hypothetical secondary plane of narrative, which interrupts the primary in order to either make comprehensible, anticipate, or generate what is yet to come. No longer representing a simple linear account, the employment of a secondary plane of narrative characterizes works structured according to an inverted chronological system closely corresponding to the Formalist conception of sjuzhet.

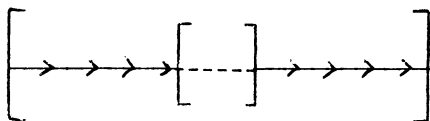


3. The "reconstruction" is a similar but distinct structure complementary to the one just noted. While the former refers to what had not been previously depicted, the reconstruction recapitulates what has already been dramatized but from a new (explanatory) point of view, offering a further consideration of what amounts to the relatively recent past--but a past not yet done with. As a general example, one might consider virtually any trial scene during which all relevant previous events are reconstructed in an effort to get at some final, irrefutable truth. By contrast to non-sequential references to the past, which focus beyond the plot's ostensible temporal bounds to provide additional information, the reconstruction functions to offer a new perspective or understanding of those previously recorded events already depicted within the framework of the plot's established bounds. This structure too, then, represents another aspect of the secondary plane of narrative inserted within the primary to provide either further accounts (as non-sequential references) or greater clarification.



4. A fourth structure, inherently related to the latter, may be considered a kind of report or "metatext," since it again, comments on the primary text. Here conceived as representing a tertiary, epistemological plane, it is designed to provide direct, straightforward explanations (psychological or otherwise) of episodes which may or may not have been previously depicted (thus eliminating certain definitional strictures

imposed on the two preceding categories). But in either case, its elucidative function, coupled with a characteristic absence of all dramatic action, distinguishes it from both the plot proper of the primary plane and from the initially elaborated or reconstructed accounts of the secondary. Representative instances occur when an analysis is offered in some manner of what had previously transpired. In effect, then, the essay form temporarily intrudes upon the novel when deemed necessary to make the latter a more viable construct.



5. Finally, related to the latter category, references may be made within a given text to other works or passages borrowed therefrom to either highlight a particular feature or underscore a specific theme. Such "incorporated texts" represent that other text from which they are derived but clearly model the given one and are, therefore, primarily iconic in nature, which precludes their consideration within the present study, whose concern remains the index. And yet it might be remarked that the incorporated text itself may reveal a structure comprising all previously noted structural possibilities, since it represents a theoretically separate, distinct text bearing essentially the same potential as the original into which it is embedded.

To conclude, one final opposition needs to be established. From among the remaining four categories discussed above, certain of these are for the most part comprised of what may be termed "dialogic discourse;" others consist primarily of "monologic" forms. While of course, interrelated--since dialogue is traditionally understood to be composed of interlarded monologic statement--the two kinds of discourse are here viewed, in the highly specific context of narrative forms, to be set in complementary opposition to one another.

On the one hand, dialogic discourse is broadly conceived to embrace direct character interaction of both a verbal and nonverbal nature (including gesture, facial expression, body movement, and so forth, as well as speech)--all the ingredients, in a word, which make for drama. Such discourse is derived then, from the present events of the plot proper, and may be characterized as active and dramatic.

By contrast, derived from past-oriented concerns, monologic discourse may be considered passive and descriptive (when dwelling on the past) or speculative (**when concurrently** projecting the future), but in any case, is understood to imply a virtually complete absence of dramatized events; no interaction depicted among characters; and, therefore, essentially no dialogue. In short, there is a high reduction of drama within particular passages of a text in favor of a more economical report to the reader. Composed almost exclusively of authorial monologic accounts, coupled on occasion with certain characters' utterances conveyed in indirect manner, there will be only the occasional incorporation for emphasis of some fragment of direct speech.² In effect, a chosen character or narrator enters into "dialogue" with the reader by engaging in what amounts to extended monologue, in order to provide the necessary information for the reader to follow the plot's further development. Such observation, furthermore, makes evident that all ostensibly past-oriented accounts must be considered as being future-directed as well, since they refer to the past only to make comprehensible what is to occur in the future.

Analogous to the traditional conception of dialogue, itself composed of interwoven monologue, the narrative text is comprised of alternating discourse--both dialogic and monologic--which is teleological in nature and functionally interrelated, since both aspects ultimately bear a future orientation, contributing to direct the plot towards its final resolution. Thus, composed primarily of dialogic discourse, the causal-sequential structure constitutes a series of indexical signs designed to take the plot--in relatively uncomplicated fashion--directly from beginning to end. By contrast, works governed by inverted chronological systems, in which there may be a sudden reconsideration of the past (offering regressive relevance) or an unexpected reference to the future (providing progressive significance), are composed of both monologic and dialogic discourse. For while the latter is surely more typical of the the novel form, the former will be seen to predominate when the reader is simply told what has occurred (or what might happen) in the manner of a report, rather than as a series of dramatized events. At the same time, such incursions into the past are, as just noted, future-oriented as well. Thus, indices which offer simultaneously regressive relevance and progressive significance are to be viewed as "dual-directed" signs, determined by their dual-directed temporal orientation.

One distinction to be made, then, between causal-sequential and inverted chronological structures involves the more obvious motivation of the plot through a series of simple indexical signs in the former instance as opposed to the possibility of the more complex dual-directed indices serving as vehicle in the latter. In both instances, however, the indexical sign--whether single- or dual-directed--functions in various respects, aside from serving as a work's connective links, depending upon the form of discourse it constitutes. For if it provides additional information in the form of hints, allusions, or vague suppositions, it may anticipate, while if it leads in causal fashion to what follows in the text, it will be seen to generate.³ Furthermore, although informative in either case, it may function in explanatory fashion as well, providing the motivation for further episodes by laying bare the linkages between what has been dramatized for the reader and what has not.

Returning at this point to the several narrative planes outlined, it remains only to note within that framework the basic functions of the indexical sign. When situated on the primary plane consisting of the present events of the plot proper, the index contributes to discourse which, by our definition, is fundamentally dialogic. Furthermore, the same applies when the index forms that kind of non-sequential reference which is dramatized rather than reported. By contrast, other undramatized references, including the reconstruction--which essentially recapitulates what has already been depicted--are thus characterized by monologic discourse. Finally, the same is to be observed with regard to the metatext which is again, by definition, monologic. Hence, the three suggested narrative planes--themselves composed of either single- or dual-directed indexical signs--may be seen to be predominantly dialogic (the primary), thoroughly monologic (the tertiary), or a combination of the two (the secondary), where the one or the other manner of discourse predominates in direct proportion to the ascendancy (=dialogic) or descendancy (=monologic) of the dramatization--as opposed to the telling--of the tale.

Finally, within dialogic discourse, the index serves in either a generative or prefigurative capacity; within monologic, it is clearly intended to be, first of all, simply informative (by telling the reader what he needs to know in order to comprehend what is yet to unfold). In pointing to or hinting at the future from either a past or present

perspective, it functions in prefigurative fashion. In leading to or causing subsequent plot developments--either by first referring to the past (as a dual-directed sign within an inverted chronological system) or leading directly from the perspective of present events (as a single-directed index within a linear chronological order)--it serves in a generative capacity. Thus, depending upon the form of discourse it constitutes, the indexical sign functions to generate, anticipate, or explicate the further text of which it is, at the same time, its primary constituent.

NOTES

1. That such references are indeed possible, consider, for example, the closing lines to Dostoevsky's Crime and Punishment and Tolstoy's Resurrection respectively.

But that is the beginning of a new story, the story of the gradual renewal of a man, of his gradual regeneration, of his slow progress from one world to another, of how he learned to know a hitherto undreamed-of reality. All that might be the subject of a new tale, but our present one is ended.

*

*

That night a new life began for Nekhludov, not because the conditions of his life were altered, but because everything that happened to him from that time held an entirely new and different meaning for him.

Only the future will show how this new chapter of his life will end.

2. Voľořinov's distinctions regarding "reported speech" are highly relevant here.

Reported speech is regarded by the speaker as an utterance belonging to someone else, an utterance that was originally totally independent, complete in its construction, and lying outside the given context. Now, it is from this independent existence that reported speech is transposed into an authorial context while retaining its own referential content and at least the rudiments of its own linguistic integrity, its original constructional independence (1973:116).

3. Following Tomaševskij's terminology, indexical signs which generate further text might be equated with his conception of "dynamic motifs"--those which "are central to the story and which keep it moving;" while indices which serve only to anticipate would be regarded as equivalent to "static motifs"--those which "do not change the situation" (1928:139).

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SYMBIOSIS AND DICHOTOMY IN THE NAMES OF ANNA AXMATOVA

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Intermeshing themes of life and love with fire, grief and song in a recurring basic pattern, the Russian poet Anna Axmatova (1889-1966) concretizes the primal etymological unity in the words 'fire', 'grief' and 'song' to convey simultaneously the dichotomy arising between the Russian words gore (grief) and goret' (to burn). The present study will explore the revolving pattern of symbiosis versus dichotomy emerging through careful coordination of the instances of dichotomy and symbiosis in the poet's names of which there are three, her first name, Anna, her inherited surname, Gorenko, and her pseudonym, Axmatova.

In the poetry the compilation of the themes of love, fire, grief and song and their development within the poet's artistic system is not mere tribute to literary tradition. Indeed, the correlation between gore (grief) and goret' (to burn) transcends the Russian definitions of the words or any folk etymology on the poet's part, reaching instead their Indo-European roots. The related Sanscrit word cōkas already contains the definitions 'flame', 'fever' as well as 'torment', 'sorrow', 'grief'. Even the connection with the Ossetic word zarun (to sing) and zar (song), disputed in M. Vasmer's Etymological Dictionary of the Russian Language, renders plausible the Greek word γῆρυς (voice).¹ The major themes of burning and grief, then, share a primary ancient verbal provenance and by association link the verse of Axmatova more firmly with the art of the ages. From one Sanscrit source the word has branched out into other languages with emendations, such as the Modern Persian sog that has retained the aspect of grief and misery. Additionally, the Sanscrit ghrnoti signifies 'to light', 'burn', 'glow'.

Because these definitions harbor the gist of the fire leit-motif prevalent in the oeuvre of Axmatova, which comprises a part of my book manuscript on the work of Axmatova and has been presented in my earlier papers, I now propose to trace in this connection the significance of her names in the context of the verse.

Ascribing significance to names is not new in poetry.² Still conveying symbiosis and dichotomy, two contradictory concepts through the semiotic usage of polysemy in names is unusual. In this sense the poet's first name Anna unites the inherited surname Gorenko with the pseudonym Axmatova. Consequently, in the predominantly lyrical verse the poet's speaker gives her name as Anna thereby fostering the illusion of complete fusion between the speaker, who is often a poet, and the person Axmatova, who is a poet. In one poem she says, "Mne dali imja pri kreščen'e--Anna, / Sladcajsee dlja gub ljudskix i sluxa." / I was given a name at baptism--Anna, / The sweetest for human lips and hearing/.³ In connection with this name the Soviet scholar of the Tartu School T. Civ'jan, instancing the repeated usage of the archaic word blagodat' (grace) in contexts concerning the persona as poet, shows that Anna, too, means 'grace' and derives from the Hebrew.⁴ An example is the poem "You Are an Apostate: For a Green Island" where the speaker censures the addressee, Boris Anrep, who moved to London, "Da, ne strašny ni more ni bitvy / Tem, kto sam poterjal blagodat'." /Yes, neither the sea nor battles are terrifying / To those who themselves have lost grace/ (133). Here the poet uses the word blagodat' in lieu of her name. In Russian the word is a compound with two roots, the first of which has not only the positive meaning, but a lesser-known negative connotation. The first root in blagodat' (grace, blessing, abundance) is blago (blessing, boon; good, happiness). Another word of the same root blagoj (good) has a surprising side (stubborn, restive; deformed, abnormal, incorrect). The second root comes from dat' (to give). Correspondingly, dual images of the virtuous, suffering persona versus the bad wayward one suffuse the early verse of Axmatova. For the antinomy arose as early as the bestowing of her first name. Indeed, the coexistence of the negative aspect along with the positive is acceptable in Axmatova's view of her persona and herself because she was born on June 11 by the Julian calendar, i.e. old style, and was hence a Gemini (bliznecy).⁵ This sign, representing twins, incorporates both good and evil, both black and white.⁶ Accordingly, in

an early poem *By the Very Sea* the kind, industrious invalid twin sister is markedly distinct from the naively destructive twin, the persona (339-346). Thus duality begins in Axmatova's astrological sign at birth and her first name with its dual roots in Russian.

The surnames represent opposite poles for the poet and the persona. The persona, who is often a poet, refers to the two surnames and the ensuing double life in the elegy "The Third":

И женщина какая-то мое
Единственное место заняла,
Мое законнейшее имя носит,
Оставивший мне кличку, из которой
Я сделала, пожалуй, все, что можно.
Я не в свою, увы, могилу лягу. (331)

/And some woman my / Only place has occupied, / My most legal/
rightful name bears, / Having left me a nickname, from which /
I have done all that is possible. / I will, alas, lie not in
my own grave. /

Although the two surnames denote different identities of the same person, the surname Axmatova takes over as in the poet's private life. There can be no return to the single surname and the simple individual. The persona and the poet dichotomize within themselves, that is they undergo a double dichotomy. For the relationship between the surnames, Gorenko and Axmatova, is identical to that of the persona as a person who feels, burns with desire, experiences joy, then grief and ultimately translates everything into her art in her capacity of poet within the poems, on the one hand, and as being Axmatova the private individual born Gorenko whose reflected experiences and flights of creative imagination are transmuted by Axmatova the poet into works of art. In other words, the names mirror the inherent antinomy in both the persona as a person and poet in the individual and poet Gorenko-Axmatova. Conversely, the first name, Anna, used with both surnames and for some of her personas (however, she never uses any other name), plays a unifying, symbiotic role. The justification of the duality in a poet hails back to the poem of Puškin "The Poet" which underscores the metamorphosis that takes place in a poetic personality during artistic creation.

There is in this poet, then, a demarcation of personalities in reality and in name between Anna Gorenko, the private citizen who performs the daily routine of living, loving, grieving, and the inspired artist, Anna Axmatova, who extols and immortalizes the experiences of love and suffering as being universal. The semantics of the poet's inherited name, Gorenko, deriving from the root 'to burn', 'grief'; 'bitter', undoubtedly influenced her choice of prevalent fire imagery and motifs of grief as a prescribed and decisive leitmotif in her verse as early as in the third collection of verse The White Flock. The epigraph to this collection suits the poet: "Gorju[I, Gorenko]i noč'ju doroga svetla" /I burn and at night the road is light/bright/. Since the poet is ablaze, she lights up the road for others as well. Significantly, one poem "And You Will Forgive Me All" entwines both semantic origins of the poet's full name:

с именем моим,
Как с благостным огнем тлетворный дым,
Слилась навеки клевета глухая. (288)

/with my name, / Like noxious smoke with gracious/merciful fire, / Has merged forever vague slander./
The adjective blagostnyj (pleasant; bringing blessing, boon, good) shares the same root blag- as the word blagodat' but consists solely of one root. Therefore there is no dichotomy, unlike the names Anna Gorenko. Both this adjective and the noun ogon' (fire) show peripheral usage of 'grace' and 'to burn', 'grief' respectively, the meaning of Axmatova's two real names.

While the poet's penname, Axmatova, was of her own choosing, it came from her great-grandmother's maiden name. Once the selection was made, however, the choice was no longer random due to the significance of the poet's Oriental heritage. The quatrain "The Name" illustrates the poet's perception of her pseudonym:

Татарское, дремучее,
Пришло из никуда,
К любой беде липучее,
Само оно--беда. (227)

/Tatar, dense/obscure, / It came from nowhere. / It is importunate in any misfortune. / It itself is--misfortune./
Trouble and misfortune seem to cling to this name. Interestingly, in the Vjat dialect of Russian the Russian word

beda is defined as: an incident that brings harm, loss, grief. The Tatar name which is equivalent to grief adheres to any misfortune. Hence both surnames are united in their meaning of misfortune. Equating the name Axmatova with beda has twofold significance: first, all misfortunes befall the person Axmatova; secondly, the sounds in the root of the surname acquire meaning. For in Russifying the root through semantic division we find that in Russian 'ax' is an interjection of anger, annoyance and surprise and 'mat' denotes four-letter profanity uttered in the event of misfortune. It must be stressed, however, that only because the name is not Russian can there be the irregular division of a root already brought to light in the poems of Marina Cvetaeva.²

Moreover, the pseudonym, Axmatova, appears to be meaningful from a truly etymological aspect. Its root axmat-derives from the Arabic "Ahmad" which is also one of the names of the prophet Mohammed. The root means "more or most laudable, commemorable, commendable." The related verb 'hamida' denotes "to praise, command, laud, extol".⁷ It is the poet who sings the praises of love as in the poem "I at Sunrise / Sing of Love" and of ensuing grief. Above all, she extolls the Muse in uttering her prayer-songs to this deity, as a priestess would. She fulfills, as it were, a prophetic and extolling role toward her deity comparable to that of Muhammed toward his Allah.

Thus through the determining factor of the surname Gorenko that reached the poet by succession and the personal traits inherited from preceding generations, her principal character was pre-determined for her as burning, igneous, creative and caring. Her Christian name Anna marked a subsidiary aspect of the person and the poet as well as the resulting persona-poet. On the other hand, the pseudonym Axmatova was selected freely, but because it had belonged to her great-grandmother and was consequently not a truly arbitrary surname despite her free choice, a restrictive category enters the selection. In the same vein is the relative freedom in concentrating on praising and adoring the Muse and creating verse as liturgy and as a release for herself and then for others from the grief of life and love. Exercising free choice the persona-poet, nonetheless, restricted herself as a result of the selection to the obligatory burning implicit in the surname Gorenko.

Finally, a parallel can be drawn between the inherited name, Gorenko, and the penname, Axmatova, on the one hand, and the correspondence between Axmatova the poet who translates into art the experiences of the person born Gorenko and her personas as person and poet, on the other. Her given name, Anna, used by some of her personas, denotes blagodati' (grace). Dual-rooted in Russian translation and dichotomous in the contradictory definitions of blagoj, Anna accompanies both surnames to produce symbiotic results, almost like a bridge. Despite the dichotomy of the two surnames, with the Slavic Gorenko deriving its root from goret' (to burn) and gore (grief) and the Tatar Axmatova denoting 'to laud', 'to extol', the two meet on the Russified grounds of beda (misfortune), thereby ultimately renewing through symbiosis the circular semantic chain of symbiosis versus dichotomy.

NOTES

1. For the etymology of these words see Max Vasmer, "Ètimologičeskij slovar' russkogo jazyka." *Perevod s nemeckogo i dopolnenija* O.N. Trubačeva. B.A. Larin, ed., Progress, Moscow, 1964-1973, II, p. 460.
2. An example of using names in poetry is found in the Russian poet Marina Cvetaeva (1892-1941) who takes off on her own names which signify sea and flower/bloom in her poems "Some Are Created of Stone, Some Are Created of Clay" and "I Know, I Will Die at Dawn" in Cvetaeva, M., 1979, "Stixotvorenija i poëmy" (Biblioteka poëta. Malaja serija. Izd. tret'e), A.A. Saakjanc, comp., Sovetskij pisatel', Leningrad, pp. 145, 151-152. Also relevant is Cvetaeva's play on Axmatova's name in the poem "O, Muse of Weeping, the Most Wonderful of Muses!" and "I Clutched My Head and Am Standing", pp. 93-95.
3. All quotations from Axmatova's poetry are from Axmatova, A., 1976, "Stixotvorenija i poëmy" (Biblioteka poëta. Bol'saja serija), V. Žirmunskij, comp., Sovetskij pisatel', Leningrad, p. 461. Hereafter the pages will be indicated in the text. This particular poem is on p. 323. The literal translations into English are mine.
4. Civ'jan, T.V., 1974, *Anticnye geroini--zerkala Axmatovoj*, Russian Literature, 7/8, p. 118.
5. Haight, A., 1976, "Anna Akhmatova: A Poetic Pilgrimage," Oxford University Press, London, p. 6.
6. Cirlot, J.E., 1962, "A Dictionary of Symbols," Routledge and Kegan Paul, London, p. 111.

7. Wehr, H., 1961, "A Dictionary of Modern Written Arabic," J.M. Cowan, ed., Cornell University Press, Ithaca, p. 204. I am indebted to Mr. Lubomir Hajda of Harvard University for his help with the Arabic.

REPRESENTATION AND SUBJECTIVITY IN MODERN LITERATURE

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Whereas representatives of impressionist¹ and phenomenological background see language as the expression of self and world, the new novelists and structuralists of the last fifteen years recognize the converse of this: that self and world are shaped by the structure of language. It seems to me that these two intuitions, radically inadequate when treated disjunctively, operate in conjunction with each other.

Three major questions were of interest to phenomenologists and writers since the end of the nineteenth century: What is the essence of perception? What is the essence of consciousness? How can language express the very specific effect of the elemental sensation, the impression? This paper attempts to illustrate how contemporary investigations in phenomenology and in the narrative discourse of works by Proust challenge the traditional notions of verisimilitude, society's mental codes and expected norms of cultural models which can be learned, repeated, and consumed.

There is a common agreement among both writers and phenomenologists that the "being-in-the-world" precedes our reflective consciousness of the world. The aim of both phenomenologists and modern writers, then, is the direct apprehension of reality. The subject, the I, constructs the reality of the world through language. For them, perception is the basis of man's reflections, and the body, anchored in the world, is the basis of perception, perceiving and being perceived, a creative structure unfolding

in time. The body is a structure open to the world, correlative with the world. The phenomenological method, as revealed in the works of Husserl and Merleau-Ponty, outlines not only the steps which must be undertaken to arrive at the pure phenomenon, wherein is revealed the essence of appearance and that which appears, but also a description of essence as contained in a thing, the direct object of consciousness. With Husserl, Merleau-Ponty and the authors to be discussed in this paper, the Saussurian distinction between the signified and the referent is unsatisfactory in that it makes no allowance for the status of the latter within the reader's consciousness. Consciousness, according to Husserl in the Cartesian Meditations, is dependent upon the constitution of the object as cogitatum or intentional object in the perceiving consciousness. The object of reference is never actually present, but the mind constitutes its phenomenal reality (which is not an imagined, pre-conceived or imaged reality). In a semiotic system, perception of the referent may be designated more accurately as the creation of a signified in the subject's consciousness by an intentional inference of the referent as signifier. The structure of the sign remains intact at the spontaneous level, described by Husserl as a reflexion naturelle (natural attitude) towards reality, and serves as a base upon which further sign systems may be imposed. At a secondary level, the subject engages upon the activity of reflection as opposed to perception, but infers its signifier not from the referent but from the signified already present within the reflective consciousness.

In Structure du Comportement,² Merleau-Ponty sees consciousness as a network of significative intentions which are sometimes clear to themselves and sometimes, on the contrary, lived rather than known. Intentionality is for him an essential step for a method of description in search of essence, such as: the essence of perception or the essence of consciousness. Intentionality refers to the entire activity of engaging ourselves co-creatively with the objects in our world. Each act of consciousness is necessarily intentional, i.e., it has a reference outside itself. Man needs the world to understand reality, and the world needs man to have a meaning. For him, a wheel does not look the same to the man who does not know how to use it as it does to the craftsman himself; a wheel lying on the ground does not look the same as a wheel bearing a load. Intentionality is not only an essential step for a

method of description in search of the essence of consciousness or the essence of perception: it makes language the expression of self and world for both the phenomenologist and impressionist writer.

Merleau-Ponty invokes Husserl's differentiation between the voluntary intentionnalité d'acte and the involuntary intentionnalité opérante.³ Language as intentional act is for Merleau-Ponty a gestural action; it is not a sign for a meaning, but an embodiment, an "incarnation" of meaning. The theory of parole (with its non-conceptual elements: sens émotionnel) strikes a balance between language understood as sign and language regarded as autonomous and will help us to understand in which ways the text to be discussed seriously challenges traditional notions of narrative causality. Embodiment is densest and richest in the language of lyrical prose, a direct description of experience in which man's essence is resituated in the context of his existence.

The rediscovery of a naive contact with the world, which precedes the reflective epistemological act, constitutes a primary expression which is always located within lived time and space. The return to the primordial expression of la parole operates a phenomenological reduction in which the self is apprehended by the lived experience only. Words are necessary to construct this transcendental consciousness which does not correspond to something existing, but on the contrary, emerges from the ambient creative silence: silence is not the opposite of speech, but the surrounding and therefore, the setting-off element or climate of speech, which surges from, and returns to silence.⁴

For the structuralist Gérard Genette, self and world, in contrast to Merleau-Ponty, are shaped by the structure of language. While Merleau-Ponty assumes in the form of language an expression of the synoptic presence of subject and object, Genette's Discours du récit (Narrative Discourse),⁵ one of the most discriminating poetics of the novel in recent years, pays too little attention to setting or description, to the evocation of atmosphere in which subjects and objects merge. By experience, Genette, in contrast to Merleau-Ponty, does not mean intentionality. He rather sees experience as grounded in autonomous language. Self and world are shaped by the structure of language. Experience rises out of a closed system of signs which is the literary work.

Merleau-Ponty grasps language in its specificity as the milieu of articulation of the reality experienced by the individual. For him, language is the expression of self and world. A word or an image placed in a particular context produces a particular effect: "The writer's work is a work of language rather than of thought," as Merleau-Ponty tells us in discussing Proust. "His task is to produce a system of signs whose internal articulation reproduces the contours of experience, the reliefs and sweeping lines of these contours in turn generate a syntax in depth, a mode of composition and recital which breaks the mold of the world and everyday language and refashions it."⁶ Thus Merleau-Ponty does not isolate language from experience.

Let us now turn to A la Recherche du Temps Perdu, to an example of a phenomenological description of self and world. Each impression is located in a time-space continuum and is modulated by Marcel's individual point of view, the nuance of emotion renewing each memory and creating new associations. The book written by Marcel is that action of consciousness in which author and reader communicate not with each other, but with their own feeling of existence. It is a necessary correlative to self-observation in a phenomenological mode. The functions of Marcel's self-esteem seem to be taken up by a variety of interpersonal systems that operate through it. Thus the text is an exploration of both writing and reading. It is about Marcel becoming a writer, about his learning how to see his world clearly and understand it, about how to structure the vision of his world in a way that will enable him to write the book we are reading. Time arises from Marcel's relation to things. It is a network of intentionalities that are a product of spatial positions. A reader approaching a Proustian sentence expects a coherent whole but actually sees many fragments which he must reconstitute into a coherent whole.

In the following passage, Marcel realizes two things: first, that the way he comes to know individuals is not through a single static position in space, but through shifting and successive perceptions, and second, eternity and infinity become a physical experience in the privileged moment of heightened awareness. Writing stops Time (it gives a text a limitless duration of time) in order to allow not

just a surface perception, but a unified vision, a vision which, by being written (captured or recaptured) can be perceived and comprehended by another, the reader. Words, once written down, constantly threaten to fix Marcel's existence which is of dynamic character. Marcel is a network of interrelationships, and the reader of this passage must, in order to gain access to Marcel's world, become attuned to the numerous shifts of focus, or orientation, since Marcel's phenomenal world cannot be reduced to anything else than that which appears in his/our field of perception. With Marcel, each act of perception seizes the perceived individual only in a certain respect, in profiles (Abschattungen) which are correlated to a determined attitude and standpoint in Marcel, the perceiver. The passage shows the writer's struggle to describe the individual act of appearing as it is in the process, in the act of appearing. The meaning of this becomes coherent to the reader through repeated reading. Proust makes us conscious of the way he sees reality and in this process dramatically extends our field of vision, our possibility of learning to see with Marcel:

Nous ne pourrions pas raconter nos rapports avec un être que nous avons même peu connu, sans faire se succéder les sites les plus différents de notre vie. Ainsi chaque individu - et j'étais moi-même un de ces individus - mesurait pour moi la durée par la révolution qu'il avait accomplie non seulement autour de soi-même, mais autour des autres, et notamment par les positions qu'il avait occupées successivement par rapport à moi. Et sans doute tous ces plans différents suivant lesquels le Temps, depuis que je venais de le ressaisir dans cette fête, disposait ma vie, en me faisant user, par opposition à la psychologie plane dont on use d'ordinaire, d'une sorte de psychologie dans l'espace, ajoutaient une beauté nouvelle à ces résurrections que ma mémoire opérait tant que je songeais seul dans la bibliothèque, puisque la mémoire, en introduisant le passé dans le présent sans le modifier,

tel qu'il était au moment où il était le présent, supprime précisément cette grande dimension du Temps suivant laquelle la vie se réalise./

With this passage we have the impression of an emerging order, of individuals in the act of appearing, viewed not in linear, but in lived perspective. To trace just a single outline of the individual would sacrifice depth, the dimension of an inexhaustible human reality. Instead, when Marcel attempts to seize the identity of others or of himself, they seem to dissolve simultaneously into a multiplicity and succession of selves in space and time. Therefore, he contrasts psychologie plane (two-dimensional psychology) with psychologie dans l'espace (three-dimensional psychology). The former is dealing with body and mind only, and the latter with body, mind, and Time. We see the depth of time, as Gilles Deleuze states: ". . . Time itself is plural. The great distinction in this regard is that between Time lost and Time regained."⁸ The real appears to both Marcel's and the reader's field of perception constantly filled with a play of colors, noises, and fleeting tactile sensations, the background from which all acts stand out. Thus, the text has a total and sacred freedom of structure, and this evidently creates surprises, not to mention difficulties for the reader, inasmuch as the novel no longer represents a causal sequence that is coherent and that extends from one end of the book to the other. Finally, with the notions of space, time, individuality, all the conditions and limitations of ordinary life are suspended together; eternity and infinity become a physical experience in the privileged moment of heightened awareness--of writer/protagonist/reader.

With the work of Proust, we have tried to illustrate that the novel moved toward a text where the text itself is affirmed as its own reality, that is, a text concerned with representing the narrator's consciousness through which reality is filtered and by which reality is presented in narrative form.

NOTES

1. Kronegger, M.E., 1973, "Impressionist Literature," College University Press, New Haven.

2. Merleau-Ponty, M., 1949, "Structure du Comportement," Presses Universitaires, Paris.
3. Husserl, E., 1950, "Cartesianische Meditationen und Pariser Vorträge," Mouton, The Hague.
4. Merleau-Ponty, M., 1952, "The Visible and the Invisible," followed by "Working Notes," Northwestern University Press, Evanston, pp. 39-97.
5. Genette, G., 1972, "Discours du récit," Seuil, Paris.
6. Merleau-Ponty, M., 1945, "Phénoménologie de la perception," Gallimard, Paris.
7. Le temps retrouvé, "A la recherche du temps perdu III," p. 1031.
8. Deleuze, G., 1972, "Proust and Signs," George Braziller, New York, p. 17.

AESTHETIC SEMIOSIS OF THE VISUAL OBJECT

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INTRODUCTION

In this paper I will explore the ways in which rational formulations can approach the "visual universe" and confront it in relation to the aesthetical domain. I will consider visual objects as semiotic entities in order to handle them as sign-functions (not only terminology, but many of the ideas of this essay were based on the work of Umberto Eco). Furthermore, I will take into account the form in which these sign-functions are coded and the rationalization of this process in connection with the sets of rules that are provided by different aesthetic codes.

Therefore, the central point of this paper is the rational "construction" of the aesthetic object and neither the possible meanings of the sign-function nor the manipulation of the variety of expressive forms. I want to stress the applicability of the opposition infinite/infinitesimal as an analytical tool.

Since visual objects, by their own nature, challenge their reduction to existing codes and they are continuously "breaking" the current conventions and creating their own sign-functions, instead of being produced and delineated by certain codes, there is an analytical problem -- how to understand and establish the rules of the code, where there are no previous conventional norms?

The situation is more complicated if we pay attention to the way in which new conventions can arise through operative adjustments of the existing codes. Explicit innovations in the code may remain as characteristic products of the previous code, even if they reject the use of several components. Whereas, a minor reformation of one of the rules of coding may result in a drastic change in the nature of the aesthetic object.

So, this semiotic process involves variations that require different analytical levels of observation in order to find out the internal relations and the socio-cultural determinants that condition the modes of production of aesthetic objects.

Moreover, the multiple interdependency of these factors and the unpredictable intervention of human beings in the elaboration of aesthetic objects suggests that, in order to fully understand the aesthetic phenomena it is fundamental to consider them as integrated elements of a "totality".

1. ART AS A SIGN SYSTEM

1.1 In 1939, Charles Morris suggested that art per se is a sign system and hence, Aesthetics is part of Semiotics. Without adopting this extreme position, it is possible to study the aesthetic phenomena from a semiotic perspective, considering the work of art in relation to the sign-functions it engenders. From this point of view, we can elaborate the following arguments:

1.2 A work of art can be regarded as a sign-system that is able to produce several sign-functions. So, artistic objects can be translated into a number of associations and abstract relations. And this is done according to certain circumstances and the set of rules proposed by a particular aesthetic code--to do this, a number of dimensions are enhanced in correspondence to a related group of values.

1.3 One could compare different works of art by their degree of conventionality in terms of a particular aesthetic code. One would have to find the series of specific relations and associations established by the aesthetic code, and then

investigate if these series are common phenomena for the elements in the subjects of analysis.

This type of research calls for the use of rather intricate topological methods, with which the structure and processes within the structure of a work of art can be detected and compared with the external aesthetic codes.

As a point of convergence for the semiotic analysis and the artistic production, we can say that a sign-function is an aesthetic sign-function when it is related to a certain code.

1.4 So, a work of art is related to aesthetic coding, but the nature of this relation requires some considerations, since a superficial analysis might lead to a naive conclusion: that conventionality can be assumed as the basic characteristic of the aesthetic semiosis. On the contrary, artistic objects--as sign-functions--are not fixed or stable entities, they are provisional results of certain rules of coding that establish transitory correlations between mutually independent elements of different systems. (2)

1.5 Moreover, a work of art is not an isolated sign-function, it is a "text" that requires a multidimensional "reading". In other words, it is a cluster of sign-functions converging at once. From this standpoint an aesthetic object is a text characterized by a series of superimposed aesthetic codes, circumstances and contextual determinants interacting at one time--in such a way, that the existing codes are not able to provide the set of rules for interpretation and the process requires the "concrete" participation of the observer.

1.6 The superimposition of several aesthetic codes and the deviations from the norms engendered by the text produce a semiotic "chaos", in which A) units of one system do not correspond to units in other systems according to existing norms, B) it is not even possible to identify the functions or elements of the plane of expression, C) new relations of the sign-functions cannot be either isolated or defined as rules of a code, etc. As a result of this semiotic chaos the work of art attracts attention to itself and becomes rationally ambiguous. (At this point we can reconsider R. Jakobson).

In other words, a potential work of art, aesthetically coded, surpasses its condition as a simple object. This process requires the establishment of a "rational" mode of relation between the particular sign-system of the object and the social sign-system for which it is regarded--the object becomes a work of art, at a rational level, when it is related to certain aesthetic codes. From this broad perspective anything can be conceived as a work of art at a certain time--we can think of "ready mades," "revivals" and "camp" as clear examples--if there is a rule which implies that the initial sign-function of the object has been transformed and its current significance has been "rationally constructed" as a more "aesthetic sign-function" according to a particular code.

So, any discursive analysis of "art" should--at least--take into account the relation of the sign-functions of the object with the particular historical moment in which it is framed. In this sense, a work of art can be studied as a sign-system, if the relations of the artistic object with the cultural production and the social praxis, in which it is involved, are considered as the point of departure for the "rational construction" of the object.

2. OPERATIONAL DEFINITIONS

2.1 Aesthetics: This term is understood not as a cluster of universal values that delineate what is and what is not a work of art, nor as a theoretical conceptualization or "abstract category", but as a "concrete entity" that is produced by social praxis. Aesthetics as a semiotic dimension implies the social objectification of everyday experiences. This is, the transformation of the alienated sign-functions--through dialectical tension--into more socially objective sign-functions.

The concrete use of an aesthetic sign-function arises from social action, from the continuing development and interaction of the codes, from the practical individual use of the codes, where the equation of the theoretical sign-function and the social praxis (3) proposes neither universal and specific meanings nor subjective isolation of the individual meaning, but an historical transformation of the social codes from where the sign functions were constructed.

2.2 Aesthetic codes: They refer to the groups of "non-completely-determined" rules that produce a way of coding--relation, association-- of elements of different systems, by and through certain socio-cultural conventions. As a common characteristic, every aesthetic code supports a particular mode of production of sign-functions. And naturally, every code responds to a set of values and portraits of ideological constraints.

2.3 Aesthetic ideolect: This is a particular kind of coding (potential code) that has engendered a sign-system/work of art. It is an aesthetic code to the extent that it has been applied to an aesthetic text -or it may be better to say that it has been created by that text. This way of coding can be outlined as a dynamic set of rules that delineates the deviations from the social norms; it is the pattern that explains the new sign-functions of the text. In this way, each aesthetic tendency suggests particular senses for the sign-functions, different modes of coding and new postulates in relation to the changing social reality and cultural praxis.

Further, an ideolect can be incorporated or integrated into an aesthetic code, even though it has broken current convention, because it is absorbed or coded according to certain social elements. Through this process, new modes of rationalization become socialized.

2.4 Work of art: The initial consideration is that a work of art implies a manipulation of the sign-functions attributed to an object. This manipulation is related to the aesthetical codes that influence the artist and the observer at a given time-space setting. The rational "construction" of the object depends on the process of interpretation, selection and transformation of the conflicting codes, where the work of art is engendering its own rules. So, several aesthetic codes and self-developed rules converge at one point: the creation of the artistic "text".

Thus, a work of art is made of partial deviations from existing norms, where the manipulation of the sign-functions and the alteration of the structural connections produces reflexivity and ambiguity on the text. The social objectification of a work of art is then a reconstruction of the sign-functions, based on the aesthetic ideolect conflict with the existing codes.

3. CONSTRUCTION OF THE OBJECT

3.1 The commutation of the codes inside the aesthetic object and the interdependency with conventional norms imply a restructuring of the sign-functions in two directions: (A) towards itself (internal codes) and B) towards social reality (external codes). In this regard, a work of art is the subject matter of semiotic research in both ways, as internal and external processes. However, this distinction serves only as an analytical tool, since there is a convergence of the processes and the structural relations are overlapped.

3.2 The social assimilation of the work of art is based on a continuous relation between the work of art itself and the interpreter. The former proposes certain variations on the codes and the latter accepts or rejects the new modes of coding that are suggested. The interpreter uses the codes that he or she knows and tries to apply conventional norms to the text. (A work of art, as an open text, is the extreme application of the principle of reader cooperation).

3.3 Art, as a sign function, oscillates between the stability of the existing codes and the deviations from their norms. It is a process that goes from the societal translatability, required for collective comprehension, towards the self-reflective nature and ambiguity that differentiates the works of art.

3.4 The social dimension of the work of art is manifested through the interaction of the actual ideolect of the text against the background--conventional forms--from which it is perceived; where the transformation of a norm amounts to a cognitive conflict with the social codes. In this way, the internal characteristics of the aesthetic object might engender a new kind of appreciation of the social processes.

3.5 At an analytical level, the opposition of internal and external codes can be regarded as a descriptive device that facilitates the understanding of the aesthetic semiosis. The opposition, however, is still an "abstract categorization" of the aesthetic phenomena. Nevertheless, if we consider it just as a flexible-transitive categorization, it may be helpful. Naturally, the boundaries of this opposition are not clearly established, but we can try to follow a rational discursive pattern, taking an arbitrary center as the point of departure.

3.6 From this point of view, the transformation of the sign-functions, as a result of the opposition of internal and external codes, is determined by the series of deviations that challenge the conventional norms. In order to understand the ideolect of a work of art, the process of interpretation is extended through an indefinite chain of interrelations, where the challenge can be confronted by two semiotic phenomena: A) overcoding or enlargement of the existing codes through further segmentation of their rules--to an infinitesimal level--or B) undercoding or projection of tentative functives that may become the rules of potential codes.

3.7 These phenomena of extracoding are the basis for the semiotic analysis of aesthetic objects and the challenge provided by the interrelation of the work of art and the social reality. From the opposition of internal/external codes we can consider the semiotic function of an object at an infinite or infinitesimal level.

4. UNLIMITED SEMIOSIS OF VISUAL OBJECTS

4.1 It is possible to translate visual objects into series of metaphors but this "transmutation of materials" will never be fully completed, because the semiotic "philosophers' stone" does not exist. Nevertheless, the discursive construction of visual objects can be approached through this process of metaphorization up to an infinitesimal/infinite level, where the opposition of internal/external codes serves as one of the parameters from which the unlimited semiosis of the visual objects is analyzed.

4.2 The use of a discursive perspective to appreciate the aesthetic phenomena has limits of applicability, since there are certain aspects that escape the apprehension of the discursive pattern. There is an unspeakable "something else" that is not reducible to a congruent definition. However, the discursive apparatus and the aesthetic domain, through a mutually catalytic relationship, are continuously enlarging their boundaries. The evergrowing discursive apparatus "invades" the field of the aesthetic domain, and viceversa. The relation between art and discursive forms is also extended through a continuum of infinitesimal/infinite "struggles". When this opposition is taken into the "visual universe" we find that the aesthetic phenomena is engendered through an exponential process of metaphorization, if it is considered from a discursive perspective.

4.3 So, in order to stop the aesthetic semiosis of visual objects, we have to take into account the internal/external code-relation as a form of exponential variations, where the correlation between the functives of the "text" is projected as an infinite regression. In other words, there is not a simple extracoding process. There is always a composed hypothetical over/undercoding of the visual aesthetic experience.

4.4 As a result of this exponential variation of the text, the superimposition of the codes, circumstances and contextual determinants, leads to a connotative construction of the sign-functions, where the lexic-definition of the visual object does not exist. The over/undercoding can be projected as the process that explores connotative constructions.

When a "mark" is distinguished as part of the visual object, the discursive reconstruction starts in two directions--the segmentation/overcoding and the projection/undercoding. The overcoding leads to infinitesimal analysis of this "mark" to an infinite number of possible functive relations in order to produce coding rules, where the extension of the infinitesimal/infinite construction will depend on the the internal/external code-relation of the work of art.

NOTES:

1. I am using "totality" in a marxist sense. I understand it as the predominance of the whole over the parts, where all kinds of elements can be studied from an integrated point of view, because as a social object nothing is isolated, nothing exists per se. We can only comprehend the social implications around the aesthetic object if we look at the relations it has with other social entities and the way in which they oppose each other and how they are mutually transformed by these relationships.

2. One system is the transmissor-vehicle and the other one is the transmitted message.

3. Following the marxist concept of theory and praxis, where a postulate supposes a social praxis, and the praxis is the way in which the postulate is confronted with social reality--through a dialectic relation. Postulate and praxis

are mutually affected by each other, as part of the same continuous movement and one cannot be understood without the other.

INDEXICALITY IN ESTHETIC SIGNS AND THE ART OF DANTE

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Recent discussions of portraiture have stressed the fact that the goal of a portrait is not so much iconicity or mimesis, for in that case a full-length mugshot would be superior, but rather in "rendering present" the subject for the viewer. Wendy Steiner, in her article on the semiotics of this genre, has suggested that this "rendering" is due to the indexicality, rather than the iconicity, of the sign.¹

Yet, to speak, as she does, of "indexical magic" does not exactly clarify the matter. How does a portrait embody an index? Peirce gives one explanation:

We say that the portrait of a person we have not seen is convincing. So far as, on the grounds merely of what I see in it, I am led to form an idea of the person it represents, it is an Icon. But, in fact, it is not a pure Icon, because I am greatly influenced by knowing that it is an effect, through the artist, caused by the original's appearance, and is thus a genuine Obsistent relation to that original.²

The character of a portrait is that by "rendering present" it encourages the viewer to take it in place of

its object. Introducing Saussurian terminology, we might say that the signifier acquires an opacity usually associated with the thing itself. Steiner argues that portraits, by "rendering present," seem to put the observer in contact with the object of the sign, thus serving as indices. Consequently, visual icons have an inherent indexical quality. However, this innate characteristic can be defeated by the symbolic element. If we accept, after Gombrich³, that iconicity is largely convention-bound, then it is possible to understand how this arbitrary element can be emphasized until it eclipses the iconic or indexical elements of the sign. For instance, one is unlikely to pay much attention to any of the individuating or sensual characteristics of a no-smoking sign (PLATE I). By the same token, it can hardly be said to "render present" any particular cigarette. In this case we may say that the signifier is transparent and that we tend immediately to see through it to its signified: the fact that one is not supposed to smoke where the sign appears. This icon of a cigarette has lost its natural opacity and indexicality due to over-coding: its features are so predictable that there is no information to be gained by any but the merest glance. Note, though, how quickly one's attention returns to the signifier in the following case (PLATE II). Despite the fact that, in this case, the iconicity between this sign and a real turkey is negligible, here the natural opacity of visual signs is unimpaired.

Portraiture distinguishes itself from other visual signs by the assumed existence of not only designata but also a denotatum, and thus the opacity of the signifier takes on a dyadic, Obsistent relation, as Peirce suggested. Yet, to say that a sign is a record of the effect of something on someone, as Peirce seems to, still does not explain its effect on the interpreter. For we will only accept that the object indicated is real and has "fixity" if it refers to what Peirce called an "individual," and in that case it must have some distinguishing and unique characteristics. Therefore the index too must share these qualities, and hence what we are really speaking of in portraiture are iconic indicies, that is, indicies with opaque signifiers that share with their objects some unique and individualizing characteristics.

What this means is that an icon can be more or less opaque, and that this will determine its indexical effective-



No Smoking

PLATE I



PLATE II: "No Turkeys Allowed," Gopher Products Corp.,
Carson City, NE., 89701.

ness. Boris Uspenskij has written convincingly on this concept of what he calls "degrees of semioticness." According to his theory, the no-smoking sign is so over-coded that it seems more "semiotic," that is, conventional and transparent, than our turkey. He has demonstrated the use of the contrast between degrees of semioticness in Russian ikons, and much the same technique is being used by Dante Gabriel Rossetti in Astarte Syriaca, a portrait of Jane Morris (PLATE III). Here is Uspenskij's explanation of the technique:

What takes place here is an enhancement of the semiotic quality of the representation: the description is not a sign of represented reality, as it is in the case of the central figures, but a sign of a sign of this reality. It is a reinforcement of the conventionality of the description. Accordingly, the central figures (the figures in the foreground) are opposed to the secondary figures by the fact that there is a lesser degree of semiotic quality of conventionality in their description. A lesser degree of realism (verisimilitude) in the description; the central figures, as opposed to the secondary ones, are less semiotic (conventional) and, accordingly, more lifelike.⁴

We might, though, wish to phrase Uspenskij's concept in more judicious terms, for it is not a matter of degrees of semioticness, but rather of kinds. That is, it is not that one element is more or less semiotic, or more or less "unmediated," to use Charles Morris's term,⁵ but rather that some elements seem more artificial or contrived in contrast to others that more closely follow the current conventions of realism.

In Rossetti's Astarte Syriaca it is the central figure that, compared to the other elements in the painting, comes closest to the conventions of realism, while the secondary figures seem to partake of a more antiquated and stylized set of conventions. Needless to say, this can only be conceived of as a polarity: there is no "degree zero" of realism, but rather a contrast achieved between various elements. In this painting we have a contrast between the central figure and a sort of idealized medievalism in the background. The lack of verisimilitude is most noticeable in the near exact duplication of the two angels. Further,



PLATE III: Astarte Syriaca, Dante Gabriel Rossetti, 1877,
Manchester City Art Gallery.

their profiles are contrasted with Astarte's full frontality, another technique of early religious art that was noted by Meyer Schapiro: ". . . the face turned outwards is credited with intentness . . . It seems to exist both for us and for itself in a space virtually continuous with our own . . ."6 This continuity with the viewer's space is in contrast to the rest of the painting. Here, unlike Renaissance perspective, contiguous bodies do not imply continuity in space. It is impossible to tell how much distance separates the angels and Astarte, the angels and the spheres, or the sun and moon themselves. Also, the extreme stylizations of these last elements, the sun, for instance, with medieval rays, combines with the symmetry of Astarte's curls and the regularity of the drapery to convey formality and artificiality. What this all achieves, of course, is the insistence through contrast of Astarte's face (PLATE IV).

While the fact of an indexical relationship per se does not require iconicity, poets since the Victorian age have tended to attempt some sort of iconicity between the work of art and their verbal work based on it. I have maintained that an iconic index achieves its indexical quality through the sharing of individualizing and unique characteristics with its object. I believe that we can discern this same attempt towards iconicity, transferred to the verbal medium, in Rossetti's poems on paintings. Let us first look at the poem he wrote for Astarte Syriaca:

MYSTERY: lo! betwixt the sun and moon
 Astarte of the Syrians: Venus Queen
 Ere Aphrodite was. In silver sheen
 Her twofold girdle clasps the infinite boon
 Of bliss whereof the heaven and earth commune:
 And from her neck's inclining flower-stem lean
 Love-freighted lips and absolute eyes that wean
 The pulse of hearts to the spheres' dominant tune.

Torch-bearing, her sweet ministers compel
 All thrones of light beyond the sky and sea
 The witnesses of Beauty's face to be:
 That face, of Love's all-penetrative spell
 Amulet, talisman, and oracle, --
 Betwixt the sun and moon a mystery.⁷

The most striking aspect of this poem is its use of what J. Gonda called "balance binary word groups".⁸



PLATE IV: "Study for Astarte Syriaca," Rossetti, 1875,
Victoria and Albert Museum.

"sun and moon," "Venus . . . Aphrodite," "heaven and earth," "lips . . . eyes," "sky and sea." These are highly conventional associations, the first term leading us to expect the second. On one hand, we might suggest that this emphasis of the paradigmatic (seen most clearly in "spell/Amulet, talisman, and oracle"), the use of enjambment which, as Steiner has suggested, prevents syntax or versified units from either beginning or ending, and the sense of closure and circularity achieved by the last line being a near duplication of the first, are all being used to disrupt the temporal flow of the poem, rendering it closer to the stasis of visual art. Yet, I think Rossetti is attempting something even more difficult. In over-coding the poem by the use of common binary word groups, by the rhyme scheme with its preponderance of the acute vowel /ē/, and its use of alliteration (for example, "And from her neck's inclining flower-stem lean/Love-freighted lips and absolute eyes that wean," with three consonants in each line), Rossetti is attempting a verbal equivalent to the highly stylized representations of the companion painting. But whereas in painting these elements are contrasted with the uniqueness of Jane Morris's face, the center of the poem is hollow, a "mystery" as Rossetti calls it.

Unfortunately, much as this in theory would appeal to such contemporary critics as J. Hillis Miller,¹⁰ this poem does not seem to me successful. Rather than contrasting highly conventional forms with more naturalistic ones as he did in the painting, in the poem we are given only the conventional which, due to this very lack of contrast, strikes us as a trite and clichéd. The problem that Rossetti failed to solve here was how to achieve an opacity of verbal signs. In painting, he could use antiquated stylization to render the naturally opaque signs more transparent, emphasizing by this the natural indexical quality of the non-conventional signs. However, a direct translation of this technique into the verbal arts must necessarily fail as verbal signs are, instead, inherently transparent and unmotivated, that is, we tend naturally to see past the signifier and attend only to the signified, due to their solely conventional, or symbolic, character.

Fortunately, Rossetti was able to achieve this opacity of verbal signs in another poem, written for the famous Titian/Giorgione painting, la Fête champêtre (PLATE V):

WATER, for anguish of the solstice:--nay,
 But dip the vessel slowly,--nay, but lean
 And hark how at its verge the wave sighs in
 Reluctant. Hush! beyond all depth away
 The heat lies silent at the brink of day:
 Now the hand trails upon the viol-string
 That sobs, and the brown faces cease to sing,
 Sad with the whole of pleasure. Whither stray
 Her eyes now, from whose mouth the slim pipes creep
 And leave it pouting, while the shadowed grass
 Is cool against her naked side? Let be:--
 Say nothing now unto her lest she weep,
 Nor name this ever. Be it as it was,--
 Life touching lips with Immortality.¹¹

Rather than attempting to subvert the temporal flow of the poem in imitation of the painting as he did with Astarte, here Rossetti has tied the perceiver's sequential scanning of the canvas to the sequential march of the poem. He starts with the glass vessel at the extreme left. The poet imagines the woman dipping it into the well, listening to the sound of the water rushing in. The first reading of "Hush!" seems to suggest that this is the poet continuing his speech to the figures in the painting, but it may also be onomatopoeia, the sound of the water which, it is clear, is somehow responsible for silencing the revelers. Here Rossetti is using the sole class of iconic verbal signs which, like all icons, have an inherent opacity.

Rossetti then directs the movement of the viewer's eye from the foregrounded woman to the background sunset, identifying one of the major diagonals of the composition. The manner by which he achieves this is through the homonymic slippage of the word "brink": the brink of the well leads to the brink of day. Of course, what is implicit is a metaphor between the round vessel being dipped into the well and the sun descending. For Peirce, metaphor is iconicity of the third degree.¹² Yet this definition of metaphor is based on a visual similarity grasped by the interpreter, whereas Rossetti is relying on the homonymity of two expressions: "brink of the well" and "brink of day."

While the phrase "brink of day" has caused some critics problems, leading them to believe Rossetti mistook this scene for morning rather than late afternoon,¹³ the other case of homonymity in the poem is clearer. Rossetti asks: "Whither

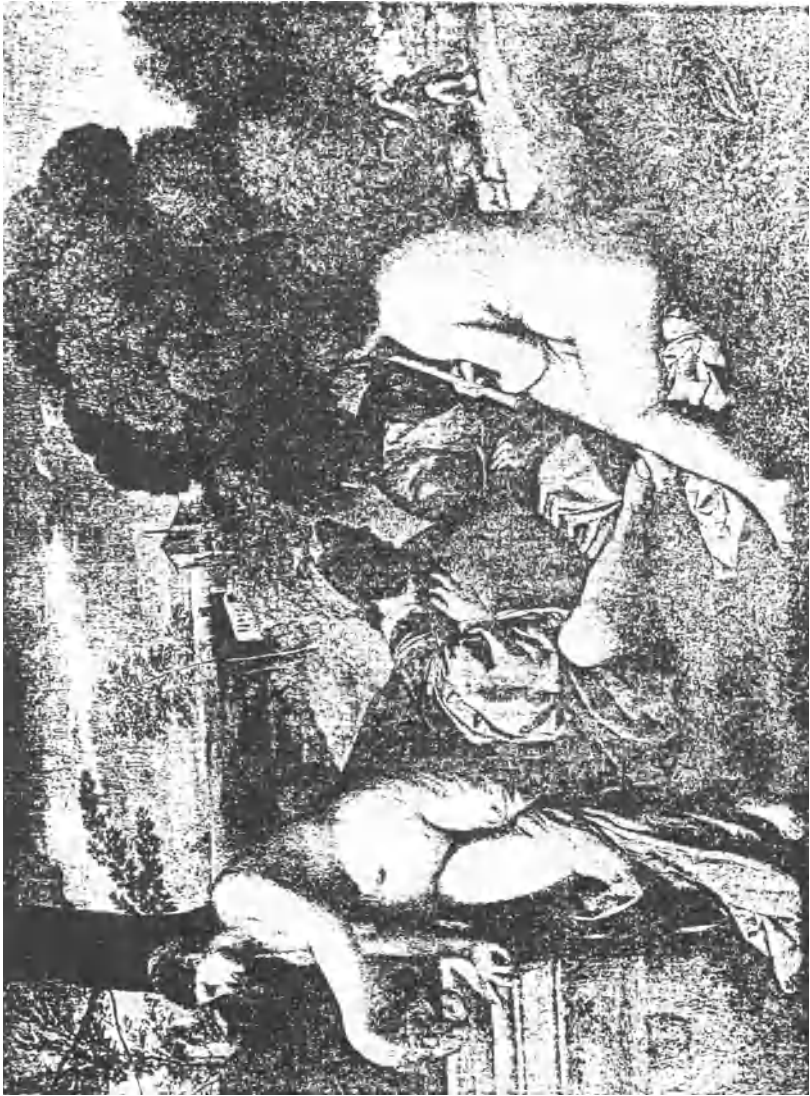


PLATE V: la Fête champêtre, Titian/Giorgione, The Louvre, Paris, France.

stray/Her eyes now . . .?" As we follow with him the other major diagonal of the painting from the top-right to the bottom-center and "her naked side," we pass over the sheep and shepherd in the background; in other words, "straying sheep" has suggested "straying eyes." It is the very conventionality of this locution that defeats the simple iconicity of the metaphor and insists rather on the word itself. That is to say, whereas in metaphor there is an iconicity between signifieds, here, as with puns, the interpreter perceives a similarity in the signifiers. Perceiving this similarity necessarily defeats the natural transparency of the verbal sign, rendering it opaque in the same way visual signs naturally are. Rossetti in this poem has verbally reproduced his scanning of the canvas: just as his eye moves from the woman at the well to the sunset and from the shepherd and his flock to the other woman's foot, so he has represented this by the homonymic slippage of the words "brink" and "stray."

In that verbal signs are rarely motivated signs, we could not say that if, for instance, there is a well in the painting and the word "well" in the poem that there was then a sharing of unique characteristics. This was the very problem that defeated Rossetti in his poem on Astarte, the impossibility of finding a symbol for Jane Morris's face that would have iconicity and motivation, and thus the shared individuality. What he substituted for the iconic motivation of the painting in his "For a Venetian Pastoral" is homonymic slippage which, like the iconic indices of a portrait, relies on the similarity of the signifiers. This analogy is much like Peirce's concept of diagrammatic iconicity. Thus there is a true iconicity between the reception of the painting and the poem based on a sharing of unique motivated signs which record the effect of their objects on the perceiver. In essence, Rossetti has made a verbal portrait of Titian's painting.

What I have attempted is first to clarify how a visual index renders its subject present to the viewer. I have argued that this is done through the sharing of unique characteristics between the object and its sign, in other words, through iconic indexicality. Not all icons impress the interpreter as indices of their objects (due, for example, to over-coding), nor are all indices iconic. Portraiture is a useful paradigm for establishing the parameters of this sort of semiosis.

My next question was how such a concept could be transferred to the verbal arts and unmotivated signs. I have attempted to demonstrate that in the case of Rossetti's "For a Venetian Pastoral" we have not only the record of the effect of the painting on the author, but also a real iconicity between characteristic elements, in this case the compositional diagonals of the painting and the homonymic word play of certain phrases in the poem. Thus it satisfies both the requirements I have suggested as defining iconic indices. Hopefully, this leads us a little closer to an understanding, not only of how portraits "render" their subjects present, but also how a poem can evoke a painting on which it is based.

NOTES

1. W. Steiner, *The Semiotics of a Genre: Portraiture in Literature and Painting*, *Semiotica* 21:1/2, pp. 113-119.
2. "Collected Papers of Charles Sanders Peirce," C. Hartshorne and P. Weiss, ed., *The Belknap Press of the Harvard University Press*, Cambridge (1965), 2.9.
3. Cf. E. Gombrich, "Art and Illusion," *Pantheon Books*, New York (1960).
4. B. Uspenskij, "A Poetics of Composition: The Structure of the Artistic Text and Typology of Compositional Form," V. Zavarin, S. Wittig, tr., *University of California Press*, Berkeley (1973), pp. 102-103.
5. C. W. Morris, *Esthetics and the Theory of Signs*, in: "Writings on the General Theory of Signs," Mouton, The Hague (1971), pp. 415-533.
6. M. Schapiro, "Words and Pictures: On the Literal and the Symbolic in the Illustration of a Text," Mouton, The Hague (1973), p. 38.
7. D. G. Rossetti, "The Works," W. M. Rossetti, ed., *Adler's Foreign Books, Inc.*, New York (1911, 1972), p. 226.
8. Quoted in R. Jakobson, *Poetry of Grammar and Grammar of Poetry*, *Lingua* 21, Amsterdam (1968), p. 600.
9. W. Steiner, "The Colors of Rhetoric" (forthcoming).
10. Cf. J. H. Miller, *The Critic as Host*, *Poetics Today* 1:3 (1980), pp. 107-118; and *A Guest in the House*, *Poetics Today* 2:1b (1980/81), pp. 189-191.
11. Rossetti, op. cit., p. 188.
12. Peirce, op. cit., 2.277.
13. R. L. Stein, "The Ritual of Interpretation: The Fine Arts as Literature in Ruskin, Rossetti, and Pater," *Harvard University Press*, Cambridge (1975), p. 21.

SUBJECTS AND OBJECTS: QUICK NOTES ON THE STATE OF ART
HISTORY

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We should have to study together,
genetically and structurally, the
history of the road and the history
of writing.

J. Derrida, Freud & the Scene of Writing

A system is nothing more than the
subordination of all aspects of the
universe to any one aspect. Even the
phrase 'all aspects' is rejectable,
since it supposes the impossible ad-
dition of the present and of all past
moments.

J. L. Borges, Labyrinths

In his book Work and Commentary (1973) Victor Burgin, in
speaking of changes in the discourse on artwork, wrote the
following:

Neurath spoke of science as a boat which is in the
process of reconstruction while simultaneously being
kept afloat - a plank-by-plank procedure retaining
at any one time the greater bulk of the vessel.
The art community tends to behave as if it is in a
similar sort of boat, but the reconstruction is not
an orderly one. Passengers on the upper deck are

irritable because the work keeps them awake. The workers quarrel over what should be done and occasionally hammer each other. Others complain that the results are beginning to be unrecognizable as a boat.

The metaphor of a vessel rebuilding itself piece by piece as it sails is ultimately taken from a tale told about the ancient Argonauts in the story of Jason and the Golden Fleece. Under divine constraints to complete their long and arduous journey in the same ship, the Argonauts were faced with the problem of a continually deteriorating vessel. However, as archetypically clever Greeks (or perhaps as prototypical art historians), the argonauts found that they could trick the gods by replacing their ship one plank at a time, with the result that by the end of their journey they would have a completely new ship, albeit one of identical name and form.

It is a sad fact that art history has either retreated in the face of profound and fertile changes in the study of history and of nonvisual art in recent decades, or has been content to exhibit an Argonautic cleverness in its piecemeal and often superficial assimilation and application of new methodologies. And among professional art historians today there reigns a stagnant peace, frequently masking a profound malaise and frustration. It is increasingly apparent that the discipline is in deep and prolonged crisis concerning its goals and practices.

And yet whereas the stagnancy and stasis in the field may be seen as resulting from the inevitable inertia characteristic of any heavily-invested institutional discipline, it is also clear that change is actively (rather than merely passively) opposed. At any rate, it is certain that little will change without radical and thoroughgoing reexamination of the tacit assumptions which guide the normal activities of art historians and critics.

To be sure, the piecemeal appropriation of new heuristic or theoretical perspectives has accomplished little more than a papering over of cracks which bear witness to what in the view of many are fundamental and serious structural weaknesses in the ways the field conceives of and represents itself institutionally. But in rejecting an increasingly indigestible smorgasbord of contradictory goals and methods, we need equally

to avoid some version of an arid scientism which claims to explain everything. It is sad that the most avid champions of the application of theoretical and methodological perspectives drawn from semiology, psychoanalytic theory, marxist and social or critical theory have often been the most oblivious to the pitfalls of scientism and reductionism which have plagued the field since the nineteenth century.

For genuine and radical change to come about in art history, it is essential that the discourse on methodology be broadly expanded, and deeply pursued. But - what does it mean to talk about methodology? And what is the role of theory in the discourse on art?

Despite the pervasive efforts of institutional art history (particularly in the anglophone world) to erase those elements in its praxis which reveal their groundings in particular times and places, and despite the pains taken to mask elements which detract from a seeming naturalness in historical and critical discourse - a veritable Praxitelean impulse among professionals - there can be no methodology, no approach to artwork which is a dispassionate, value-neutral, and a political metalanguage. Moreover, to speak of changes in methodology (or to speak of new theoretical perspectives) is not to speak on the same level as that of exchanging chopsticks for knives and forks, or for that matter of replacing rotten planks with fresh ones in the hull of some preexistent and ongoing vessel. There is no methodology which does not entail some implicit definition and delimitation of the relationships between analyst, analysand, and society at large. To speak of methodology is, plainly and simply, to speak of ideology.

No methodology is innocent, innocuous, or devoid of bias. Each is a pragmatic function of the purposes to which it is (even unwittingly) put, beyond the ostensible immediate and seemingly natural tasks of analysis, classification, and interpretation. Nor is there any taxonomy or archive which is value-neutral, or which does not serve as a justification of a particular view of history and social relations. Indeed, to adopt a particular methodological stance is to adopt a position on history, causality, production, consumption, exchange, and in fact on the very nature of perception itself.

A methodology is not a window, even if it might be proper to suggest that any methodology frames a space of discourse. But if it be a framing, then it is not a framed view

on some autonomous and pre-given landscape. Every discourse on art incorporates a perspective which defines and evokes a landscape, a legitimized 'object' of study. The 'views' created by semiology, iconography, stylism, or critical theory are clearly not different perspectives on the 'same' thing.

Any methodology is a framework of discourse within which certain kinds of questions can be validly and logically proposed (to the exclusion and occlusion of others), and within which certain kinds of concomitant answers are made legitimate and valid. Every approach to artwork simultaneously illuminates and obscures. This is true both in general terms, and in terms of the detailed archaeological heuristics by which the discipline pursues its goals - those practices of documentation, attribution, and historical and genealogical taxonomy. These latter are inevitably seen as tools for analysis, as instruments for professional work. Yet surely this is to speak metaphorically - more precisely, to participate in a metaphorical paradigm for art study which validates and perpetuates the scientistic interaction of art history with paradigms for the physical and biological sciences. Or at least insofar as they were appropriated by art-historical discourse in the nineteenth century.

In its variant manifestations, this instrumentalist metaphor is one of the most pervasive, tenacious, and corrosive tacit structures of the discipline. It has served the discipline - or more properly it has served as a validating scaffold for art-historical praxis - in structurally important ways. By picturing methodological frameworks as tools for analysis, the discipline tacitly operates within an empiricist or positivist frame which situates the 'analyst' behind an ironic glass wall, apart from her 'analysand;' which reifies the phenomenon in question (Art) by investing it with pre-given ontological status; and which fictionally divides both analyst and art public from their own social and political contexts.

This is no mere innocuous and accidental fragmentation; indeed it may be asserted that the perpetuation of such a perspective long beyond its wholesale critique and abandonment in adjacent discipline (such as literary studies or film and photography) represents more than mere institutional inertia. It is hardly a secret that the art community has an enormous investment in the maintenance of a particular kind of art history and a particular type of critical and analytic praxis,

not to speak of a special view of art production and usage.

If all knowledge is perspectival, and if any perspective both illuminates and occludes, it also situates the observer within a framework of sociality, within a format of inter-subjective relations. In other words, every methodology is both a view onto some domain and a view from some position. It has been this 'view from' which is characteristically masked by the formats of art-historical writing and teaching - viz., the very role and constitution of the art historian and critic.

It was asserted above that to speak of methodology necessarily entails the evocation of ideology. This is patent once we are aware that a methodology is always a view from some position, and that this positionality involves the delimitation of a space of discourse among speaking subjects. Ideology is the articulation of relationships of representation to a specific organization of reality - relations which establish the positions of predication that are available to individuals inhabiting a social totality. It is manifest in the dynamics of the specific modes of the production of subjects in these representations, and in the continual transformation of social relations. Subjects (individuals and collectives established by modalities of representation) are constituted both socially and psychically. Any account of the subject for artworks must attend to the ways in which subjects are situated within frameworks of sociality, and to the contradictory processes whereby individual subjects are internally constituted.

Any attempt to analyze ideological processes leads inevitably to the question of signification, since ideology necessitates a theory of the relationships of subjects to signifying practices. On this front it is necessary to invoke the problem of the interrelations of psychoanalytic and social theories for a pertinent elaboration of subjective processes and their constructions with respect to signification. This entails a careful exploration of the status of language and artwork in connection with (but not subsumed to) ideology. It would also involve an elaboration of the place of the Unconscious, the site of interactions between psychic representations and a contradictory outside, produced in the praxis of a behaving subject.

One of the principal functions of artifacts is to fix

and situate individuals and groups as subjects for certain meanings. This simultaneously provides individuals with a subjectivity, and subjects them to a social structure, with its complex and contradictory relations, powers and affordances.

The made world is a scaffold for the erection of the individual and collective self. If the built environment is not simply the servant of thought, it is equally not merely a container which transfers thought from one brain to another. Perhaps one of the most deeply-situated metaphors for artwork in the academic discourse on art has been the logocentrist metaphor: the conception of art objects as communicative tokens, as forms of condensed message-material, or as non-verbal language.

In this perspective (which pervades theoretical perspectives as seemingly distinct as semiology, iconography, formalism, and marxism), aesthetic activity is imagined as a nonverbal counterpart of the idealist speaker/message/hearer triad of formal linguistics. The paradigm, moreover, resonates with and is supported by the supposed realism of narrativist literature, as well as with certain obvious models for economic exchange and consumption.

It is generically true that formations are made and used, and that in certain societies at particular times maker and user are distinct individuals and groups. Within such a picture it could seem metaphorically justifiable to speak of made formations as 'messages' transmitted 'through' the articulation of material so as to be 'received' or read by someone. In this perspective, the role of the art historian is construed as that of a tracer of chains of signifying activities initiated by makers and terminating in the person of some eventual addressee or beholder. Characteristically, the art historian has traditionally been a manipulator of sign and symptoms, and a communicator of effects or interpretations arising out of such manipulations.

Assuming that an artifact deserves special notice among the myriad articulations of the visual environments we weave ourselves into, the art historian typically construes the object as a communicative token or sign of the intentions of a maker who is assumed to be interested in communicating those intentions to others. In short, artwork is construed as a reflection, resonance, or representation of mental activity.

While this may in itself be proper, art-historical discourse typically introduced a particular slant to the paradigm, privileging the maker, Artist or Author of the work as an active, originary force in contrast to an essentially passive reader, consumer, or beholder of works. And the role of the art historian is simultaneously construed as that of decoder or diviner of intentionality on behalf of beholders.

That this essentially linear, transitive, and unidirectional string of signifying events privileges the Initiator or Author of the aesthetic 'message' is characteristically masked by a transformation or displacement of the 'addresser' into Zeitgeist, Kunstwollen, economic or social Forces, or into mysterious forces internal to the Author himself. The role of art historian or critic may be both inflated into that of a sacerdotal diviner, and trivialized into that of agent or publicist. In either case, a position of special knowledge and power. Such a paradigm is essentially little more than a version of sacred exegesis, as Michel Foucault and others have so poignantly reminded us. In short, the logocentrism underlying art-historical discourse is a reflex of metaphysical theologism: the artist as a chip off the old divine block, the art historian as exegetical authority, the work as the Word.

In extricating art study from its theologic formats and its perennial epistemological stasis, a focus upon the dynamic viewpoint of the active, articulating subject may be both pertinent and productive. And yet in attending to the processes of signification manifested by non-fictive subjects, care must be taken to avoid simply reversing a traditional bias toward the maker by privileging anew the 'decoder' or 'addressee.' Rather, the fundamental question of what constitutes authorship must be more saliently addressed.

Whatever the source(s) of artifactual formations, it is the user, the active constru(ct)ing subject, who is the principal orchestrator of signification. The subject appropriates, maintains, transforms, and reckons with the made world in meaningful ways, and in so doing (and in this sense) may be said to potentially 'transmit' to herself and others certain information regarding the nature of such appropriations. (I use the term 'information' here simply in a Batesonian sense of 'news of difference').

Such an assertion does not, however, throw the question

of signification into an arena of idiosyncratic bricolage, for it neither denies nor undervalues the fact that works may be intended by makers to mark, privilege, or punctuate particular contents or systems of value. Nor does it deny the patent fact that formations are employed as instruments of ideological fixity. Rather, what is suggested is the establishment of a more realistic balance of focus upon what art-works purportedly intend along with what subjects actually do with them. It is in effect to attend to the scene of art.

The logocentrist paradigm serves to mask the complexity of the different ways in which objects afford positions of 'I' and 'you' in signifying praxis among subjects. The maker of a work is in fact at the same time an addressee of her own activity, since she is capable of 'deciphering' a 'message' as she is articulating it, and since she cannot produce anything which she does not in some way understand. Thus the articulation is necessarily directed both toward herself and some Other. One articulates to oneself from the place of another. Equally, the user of formations can only 'decipher' what she is capable of articulating, construing or reckoning with herself. Communication (semiosis) involves not simply the transfer of information from A to B, but coevally involves the very establishment of the subject in relation to its Other, and the way in which this Other is internalized in the very formation of an individual subject.

In its long and complex development since the Renaissance, art history has been dominated by several major themes: genesis, continuity and resemblance. It has sought to establish a universal archive, a depository of past formations preserved for future use. It has developed institutions consonant with this purpose which serve as mechanisms for legitimization, hierarchicalization, and fixities of meaning. It has treated the built environment in terms of binary values: old vs. new, traditional vs. original, primitive vs. sophisticated, ordinary vs. exceptional (or monumental). It spoke of inventions, changes, transformations, the gradual emergence of one visual logic from another. It sought to map such emergences onto systems of social and cultural value. In fact, art history is a system of values pertaining to the nature of history, sociality, production, and perception articulated through a panoptic mechanism (the 'history of art') which affords the emergence of particular kinds of aesthetic and critical statements. Its goals are a transparency of the image or object, and a control of meaning.

The establishment of a universal archive represented a powerful attempt to reduce the actual complexities of visual production and construal to a uniform taxonomy and chronology in the service of already assumed systems of social value, legitimizing in effect certain relations of power, authority, and control. Art history became possible as a discourse, as a discipline, when aesthetic praxis became an area accessible to knowledge and control; in other words when power relations established it as a possible 'object,' distinct from other 'objects' (the body, the state, the natural world). Its establishment as a discipline operated (as with all disciplines) through territorial strategies of closure (Art vs. non-Art or vs. craft; the 'fine' vs. the 'applied;' the 'high' vs. the vernacular, etc.), and through strategies of fragmentation of analytic attention ('painting' vs. 'sculpture' vs. 'architecture' vs. 'minor' or 'decorative' arts, etc.). One salient effect of this closure and fragmentation in its domain has been a concomitant division among individual students of the visual environment, and a consequent narrowness and overspecialization of discourse. In short, the structuration of the discipline serves to preclude broad theoretical inquiry, and more than cursory methodological questioning. The discipline of art history, like all discursive structures or systems of knowledge, is effective precisely because it serves to reduce complexities, generate order, and answer questions with apparent neatness. It serves effectively to deflect the development of pertinent theoretical and methodological discourse beyond its carefully-tended boundaries (into philosophy or psychology or 'aesthetics').

It might be thought by those who survey the discipline today and come away dismayed by its increasing isolation toward the margins of the humanities and into the sunday-supplement sector of intellectual discourse, that art history has 'failed'; that somehow it has lost sight of its (supposed) aim of illuminating aesthetic behavior and perception. I would rather suggest quite the opposite - namely, that art history has succeeded in its goals, and succeeded remarkably; but I would suggest further that its goals have been primarily social and psychological in nature. The subject of art history has not been, or has only secondarily been aesthetic behavior and perception; it has been 'art.' Certainly, what 'art' is is a category, a name, that can be given to a set of interlocking historical dialogues on the built environment - not some reality below a surface on which it has been perennially difficult to get a hold, but rather a great surface network

in which a variety of discourses on 'art' are linked together in accordance with a few ideological strategies. 'Art' of course is a fiction in this sense, an ideal, unitary point: a lexical parenthesis. Any palpable object is or may become part of the fabric of aesthetic discourse and perception. The proper material domain of visual or aesthetic study is the entire articulated environment, the nature and constitution of aesthetic praxis, and its role in establishing the social and psychic affordances of subjects (both makers and users).

My claim here is a strong one: the discipline of art history has failed to produce a pertinent body of aesthetic theory in large measure because that has not been its aim. Historically, the discipline has been a mechanism for the production of a certain kind of viewing subject (an essentially passive consumer or reader), a system for the investiture of certain sets of individuals (art historians, critics, connoisseurs) with interpretative or semiotic power, and a device for the perpetuation of a notion of production which is at base metaphysical or theologic in nature. And not so incidentally, it has been a mechanism for the validation and legitimation of certain kinds of economic systems.

In the context of these observations on methodology, my implication here has been that art history, as a discipline or system of knowledge, cannot be reconstituted in a manner which reflects a dialogue with current theory without undergoing fundamental and radical deconstruction. One cannot introduce new methodologies into the discipline much as one might refit an eighteenth century house for electricity, with only minor and easily patched over modifications to an existing structure. To pretend to do so, at this rather late date in the devolution of the discipline, would amount, in my view, to mere banal and Argonautic cleverness.

KITSCH: A SEMIOTIC APPROACH

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There are two possible ways to approach the problem of kitsch; we may either attempt to describe what kitsch-objects are, or focus attention on the human attitude which enables us to judge something as kitsch. We are, therefore, confronted with two different tasks: the first one consists in investigating into properties of aesthetically deviant objects in order to delimit the kitsch-sphere within the domain of aesthetics; the second one is an analysis of an interpretation of, or an attitude towards, objects, no matter what their aesthetic value is, which turns them into kitsch. The two approaches may be conveniently labelled as the kitsch-object approach and the kitsch-interpretation approach. In this connection a following remark suggests itself. It seems natural to regard kitsch as an aesthetic failure; it is often contrasted with good or genuine art and it is defined in terms of bad taste, artistic dillentantism, lack of originality, and the like. However, kitsch cannot be simply identified with mediocre art or trash; there is a lot of trash which can be hardly regarded as kitsch. In order to account for what is peculiar about kitsch it is necessary to go beyond a characteristic in terms of aesthetics. In the present paper a broader semiotic approach is suggested. What is specific about the kitsch object is not its structural properties but the attitude toward it, the way it is interpreted and incorporated into the system of culture. An advantage of the semiotic kitsch-interpretation approach is that it is not confined to the sphere of aesthetics and makes it possible to apply the concept of kitsch to a wide variety of culturally significant objects, situations, types of behavior, etc. Further, it enables us to account for the interesting phenomenon

of revaluation of kitsch which consists in that an object may lose its kitsch characteristics when it is located within a specific cultural context, e.g., by means of irony.

A suitable basis for the kitsch-object approach is provided by the phenomenological account of the nature of art. The most fully developed theory of the structure of the work of art was formulated by Roman Ingarden (1973). Ingarden focuses attention on the literary work of art but his theory is applicable, with some modifications, to other domains of art such as music, painting, etc. (1972). Ingarden's fundamental idea is that the work of art is an intentional object. He differentiates between the physical foundation of the work of art, that is, a written text, a musical score, a painted canvas, and the work of art itself, which is created on that basis by intentional acts of consciousness. There is a fundamental ontological difference between the two. From the present point of view one aspect of that differentiation is especially important, namely the difference which lies in that the former is always fully determinate while the latter is a schematic object and contains what Ingarden calls the spots of indeterminacy (1973). The physical object is fully determinate in the sense that in principle it is always possible to decide whether it possesses a certain property or not; the intentional object, on the other hand, is schematic or indeterminate in that it has only those properties which have been ascribed to it by a finite number of acts of consciousness, while other properties, infinite in number, are left undecided. Let us illustrate the point by contrasting an author of a novel and a character in the novel. It is possible to decide the question, e.g., how tall the author was, while the analogous question concerning the character can be answered only provided the author decided it. The spots of indeterminacy, which are essential for the schematic or open character of the work of art, can be filled in various ways and thus enable to create various concrete interpretations or readings of the work. The interpretation which takes place in the process of aesthetic experience, differs in various subjects; it consists in a creative concretization of what is open in its schematic structure. Thus the work of art appears essentially equivocal; a novel allows for various readings, a symphony for various executions, etc. The equivocality inherent in works of art is explained in terms of their ontological structure; it should be stressed that none of the interpretations of a work of art can be singled out as the proper one, although

some may be regarded by the author himself or by those who are engaged in the aesthetic experience as the most important or significant.

As far as the problem of defining kitsch in opposition to the genuine work of art is concerned we face the following alternative: it may be regarded as an artistic or as an aesthetic failure. In the first case we would deal with a total absence of artistically valuable qualities in an object or with their ineffectiveness in the sense that it would be impossible to create, on their basis, a work of art. The result would be, therefore, a total failure to create a work of art that leads us beyond the sphere of aesthetics. It may be argued, however, that the phenomenon of kitsch involves a partial artistic failure; kitsch is a specific type of poor art. As far as this problem is concerned it is important to notice that the phenomenological account of the nature of art is purely descriptive, not evaluative; whatever is true of a work of art is valid regardless of whether the work is good or bad, as long as it is still a work of art. The analysis is performed on the basis of a general idea of the nature of art; consequently, the question of a specific value an individual work has, e.g., the question whether it may be classified as kitsch, is left out of account. The second case, that of an aesthetic failure, seems more promising. At the outset, however, we must put aside the situation when a failure follows from the incompetence on the part of an interpreter, his lack of discernment and his inability to engage in the process of aesthetic experience, that has nothing to do with the phenomenon of kitsch. There is another possibility, namely to regard kitsch as the aesthetic deviation which results from imposing a specific single interpretation upon the work of art. The rigidity of interpretation is tantamount to treating the work of art as univocal. In this connection two remarks suggest themselves. First, such an approach would eventually prove inconsistent with the phenomenological account of the nature of art. On the phenomenological interpretation the work of art, no matter whether good or bad or mediocre, is a schematic open structure which allows of various concrete interpretations. It follows, then, that the idea of kitsch as a specific interpretation cannot be explained in terms of the structural properties of the kitsch-object; the interpretation originates within a cultural context in which the kitsch-object is located and is determined by semiotic relations it has to other objects of culture.

The idea of interpretation of the work of art adequate for an explanation of the phenomenon of kitsch must not be confined to the work itself; interpreting something as kitsch consists in imposing upon it a meaning which can be specified within a broader cultural context. It seems fruitful to base the idea of interpretation that relates the kitsch-object to other objects of culture on Peirce's concept of semiosis. In Peirce, semiosis is a triadic relation or Thirdness and it holds between the sign, the object, and the interpretant (CP, 1.339). The process of semiosis is constituted by mediation, that is, the sign does not refer to its object directly, but the sign-relation of standing for or representing is always mediated by an interpretant which is also of the nature of sign. According to the well-known classification of signs formulated by Peirce, signs divide into icons, indices, and symbols (CP, 2.247). An icon and an index stand for their objects in virtue of a dyadic relation independent of their being involved in the process of semiosis; an icon represents owing to similarity to its object, while an index is usually causally connected to it. The case of symbol is different: it represents its object owing to the meaning it has, that is, owing to the triadic relation of mediation by the interpretant. The difference is indeed important. Both the icon and index are not signs in the proper sense of the word inasmuch as they do not contribute to the symbolic articulation of reality. Peirce calls them degenerate signs because, although they affect us in different ways, e.g., by inciting actions or emotions, they are not interpretable in terms of signs, have no symbolic interpretants, therefore cannot be incorporated into the body of symbolic knowledge. The symbol is the genuine sign in the sense that it can be understood or interpreted; the relation it bears to its object is not a physical one but a semiotical one. It follows, then, that no genuine sign can exist in isolation, independently of other signs (Buczynska-Garewicz 1978). The sign, by its very nature, is interpreted by other signs and enters the mutually interrelated sign-universe, as Peirce puts it "A sign does not function as a sign unless it is understood as a sign" (MS 599).

The above aspect of the process of semiosis seems especially important as far as the understanding of objects of culture is concerned. An object enters a system of culture provided it can be meaningfully interpreted, that is, if it can be understood in terms of signs which constitute the sign-universe. In particular, an object becomes regarded as

kitsch not owing to the structure or properties it has, especially aesthetic ones, but owing to the particular message it conveys. The crucial point of an analysis of the phenomenon of kitsch consists in specifying the way it is understood. The particular attitude of those who regard something as kitsch, enjoy or produce it, was described by Ludwig Giesz (1960); it was also examined by Hermann Broch who regarded it as a fixed form of behavior towards life (1960).

In this paper we shall confine ourselves to suggesting certain elements of such an attitude. It is a form of escapism, that is, a tendency to avoid a genuine search for values, real efforts involved in understanding of the world as it is. Moreover, it is a form of human quest for happiness which is realized in the feeling of being on a safe ground, in achieving an easy and safe satisfaction. It also involves a standardization of reactions which results from the situation when expectations are modelled after stereotypes; such stereotypes, however, are by no means always simple. As Adorno observes in his essay on popular music, it is not simplicity which distinguishes a popular hit from a piece of good music (1941). Adorno points to a tendency to substitute a mere recognition of elements for understanding of a whole; standard elements are automatically picked up and enjoyed as something already well known and expected in advance - there is no effort to grasp and appreciate the value of the whole they constitute. Further, the enjoyment of kitsch involves enjoyment of its decorativeness; an object is appreciated in terms of its decorative value, which results if the interpretation is imposed upon a work of art, in denial of the autonomy of the work and its subordination to some social or psychological function.

The consequences of the kitsch-interpretation approach to our problem are as follows. Firstly, the scope of the concept of kitsch is broadened. The concept may be applied well beyond the sphere of the aesthetic; the kitsch attitude may be assumed toward objects and situations of various types. A fine example of such an application may be found in the analysis of tourism as kitsch by Ludwig Giesz (1960), who opposes the attitude of an average tourist to that of an adventurer. Secondly, it is possible to account for the phenomenon of revaluation of both kitsch and a genuine work of art. Namely, an object commonly regarded as kitsch may be transferred to the sphere of genuine values by placing it in a new context; a message a kitsch object normally

conveys is intensified and modified. An analysis of such a situation is given by Susan Sontag in her essay on camp (1969). The phenomenon she labels as camp is actually a specific attitude towards life, an unnatural mode of sensibility; it is artificial and exaggerated but courageous and strictly subordinated to the style of life which makes use of elements of the Art Nouveau Style, of the fashion of the twenties, etc. According to Sontag, camp is not a mere safe fashion, it is a consistent and bold creation of objects, situations, and personalities. Although the term "camp" is perhaps a proper name, applicable to the particular style of life she describes, it nonetheless exemplifies the process of revaluation in general; even a stereotyped and worthless object can be put within a sort of quotation marks and invite an emotional or intellectual effort for its reappraisal.

On the other hand, a superficial or instrumental approach toward genuine works of art may also create the kitsch-situation. A mysterious smile of Mona Lisa, a sweet Raphael's Madonna, a Mondrian's painting, may function as stimuli for kitschy reactions of safe sentimentality, standardized emotions or denial of the autonomous nature of the work of art. The attitude which is responsible for creating a kitsch-situation must not be mistaken with incompetence or the lack of sensibility in a given person. What is crucial of the attitude we describe is an instrumental approach to a work of art which is supposed to stimulate canalized reactions and satisfy some emotional or intellectual needs which have nothing to do with an aesthetic experience.

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TALENT AND TECHNIQUE IN THEATRE: A SEMIOTICS OF PERFORMING

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The ability to perform in theatre depends upon a certain vitality or movement as well as the distinct articulation or delimiting of that movement. The way movement is limited in theatre is a question of a pattern or style that correlates the limits of movement according to a precise logic. In this paper, I consider both an analog and a digital logic of performing. First, I describe the analog logic of performing as talent, where talent defines a bodily capability for performing that everyone shares, though not all to the same degree. Second, I describe the digital logic of performing as technique that defines a bodily ability which can be developed as a craft which an individual either possesses or not. In a final section, I interpret the relation of bodily capability and ability in the embodiment of a meaningful gesture. Talent and technique suggest a semiotics of performing that patterns bodily capability and ability in the living gesture of theatre.

Talent

"Everyone can act," contends Viola Spolin (1963:3). And, in a very mundane way, this assumption is extremely plausible. After all, what does an actor do but move about and speak before others. Surely this "talent" of the actor is nothing out of the ordinary, for in this sense even children are accomplished performers. This conception of talent closely resembles the Aristotelian "instinct for imitation" that is inborn in every person. Spolin's remark, however, also indicates a problem that troubles aestheticians and artists alike. For if talent is the natural inheritance of every person, then why are some persons more talented than others? By speaking

of degrees of talent, instinct provides an explanation for the variable function of performing as the nature of talent.

In this section I suggest that talent is indeed "natural," but that the variable function of performing is best described as bodily capability rather than instinct or genius. To this extent, I am modifying the suggestion of Francois-Joseph Talma (1825; 1970: 181) who writes that talent is "a peculiar organization for sensibility, that common property of our being. Every one possesses it in a greater or less degree." While accepting that talent may indeed be a peculiar organization for sensibility, I suggest that talent is not a possession of being, but a function of having a body. The bodily capability of acquiring patterns of behavior constitutes an analog logic of performing. Let us consider, first, what is meant by bodily capability.

Bodily Capability

The experience of performing reveals that being a performer and being a character is grounded in having a body. Having a body is the actor's incarnation in the world as both sensing and sensible. But the actor's incarnation as both sensing and sensible is not a combination or even a synthesis of sensations or states of consciousness that are distinct from the world. Rather, embodiment is a person's manner of existence--a way of grasping the world. Merleau-Ponty (1964: 117) considers this manner of existence the body proper. "It is first and foremost a system whose different introceptive and extroceptive aspects express each other reciprocally, including even the roughest relations with space and its principal directions. The consciousness I have of my body is not the consciousness of an isolated mass; it is a postural schema."

The ability of a person to apprehend a "self-identity" does not consist of a subject passing through objective time and space in a certain way. This postural schema organizes the experience of embodiment such that the person comes to differentiate the body sensing from the body sensed. It is the concrete motility of a postural schema that comprehends body-as-myself and, in so doing, body-as-other. Bodily comprehension is the conduct of a postural schema.

Because bodily comprehension is a conduct sketched out in the world, embodiment is not truly individual.

Embodiment is not a mass of sensations given exclusively to a subject, distinct in itself, to be conveyed to others. The very means by which a conduct is accessible to a person, so too is it accessible to others. Thus, the ability to mimic an other depends upon a bodily capability that is not distinct from other persons but forms a system with others. Mimesis, in both the child and the actor, is not a sympathy by analogy, but an undivided sympathy that is lived-through together. As Merleau-Ponty (1964: 7) comments: "It is the simple fact that I live in the facial expressions of the other, as I feel him living in mine."

Actor-Audience Reflexivity

The experience of performing presupposes a bodily capability, that is, a relation of body and world. Embodiment is thus the capability for continually becoming the particular "vital undivideness" of an incarnate subject. The body, as a postural schema, establishes a correspondence between a subject capable of perceptual experience and a subject capable of expressing that experience. This correspondence between a particular situation and other possible situations occurs through bodily motility, for the body is a "ready-made system of equivalences" of passivity and activity, of sensed and sensing (Merleau-Ponty 1962: 234).

The double function of the body in symbolizing corporeal existence grounds the reflexivity of actor and audience in performing. The actor is not cut off from the situation of performing in being a character; rather, the bodily capability of opening up a particular situation to other possibilities supports the unique portrayal of a more "universal" character. Merleau-Ponty (1964: 7) points out that "[t]his mimic usage of our body is not yet a conception, since it does not cut us off from our corporeal situation; on the contrary, it assumes all its meaning." The intermingling of body and world in theatre makes possible the "magical" contact of actor and audience. John Gielgud (1939: 312) compares performing to painting where audience is "the living canvas upon which one hopes to paint the finished portrait which one has envisaged." Gielgud echoes quite clearly one aspect of social embodiment; the other aspect being that the actor is likewise a surface across which the audience plays its expectations.

Social embodiment provides a contact surface of actor and audience that is capable of playing and being played upon.

Gielgud (1939: 312) goes on to indicate that the audience is more than just a group of spectators; these people are fellow actors by which performing comes into play. The actor "learns to listen to them, to watch them (without appearing to do so), to respond to them, to guide them in certain passages and be guided by them in others -- a never ending task of secret vigilance." Actor and audience take advantage of a particular corporeal situation to symbolize its difference from other situations in a meaningful way. The pattern of this transaction -- of mutual listening, watching, response, guidance, and vigilance -- renders performer and character coherent in performing. The bodily capability of response establishes a pattern of transaction despite the "deformation" of audience-actor contact in any particular situation. And yet, it is this constant texture of deformation, of irregularity, of difference, that lends a manageable coherence to a universe of possible bodily responses in a particular transaction. Thus, bodily capability constitutes a pattern of transaction -- that is, a logic -- in performing. Before going on to specify bodily capability as an analog logic, I would like to contrast this concept of talent with that of technique.

Technique

Along with an organization for sensibility, or talent, Talma (1825; 1970: 181) argues that performing requires intelligence. Intelligence, for Talma, is the ability to select, arrange, and calculate that sensibility in performing. Hence intelligence corresponds to what might be called craft or technique in theatre. The actor develops skill in perceiving action in order to move gracefully and speak well. Actors often speak of being a finely tuned instrument. Beyond this basic level of ability, however, performing demands credibility, interest, and force. In order to achieve mastery of these qualities various systems of acting specify guidelines or procedures. Rather than attempt to catalogue techniques or even approaches to the use of technique, I would like to explicate technique as bodily ability. In keeping with the focus of this paper, I interpret technique as patterns of performing that are conventional. Performing, as technique, constitutes a competence in doing theatre.

Bodily Ability

Whereas talent is customarily spoken of as "given" to

a person, technique is described as a skill a person must develop. Gielgud (1939: 123) points out that technique is usually developed through a series of performances, through the accumulation of experience. While talent stresses the immediate response, technique builds on a collection of previous experiences in order to develop skill in performing. The collection of various experiences into a class of actions offers the actor a range of ready-made, distinct patterns of interaction.

The pattern of interaction which gives rise to a distinction of performer and character from actor and audience must be continually undertaken in performing. The nature of this task is illustrated in both the naive theatre-goer and the seasoned aesthete. On a simple level, the audience member is able to identify that the performer speaking is a character involved in the ongoing action. This technique of elucidating a character utilizes a material difference of body and environment to constitute a distinction between one character and other characters, or between character and performer. At this point, acts and intentions are attributed to the character. But this is not the only technique for establishing a character. Two performers may play a single character simultaneously as bifurcations, and one performer may play several characters. Even the chorus is a group body that, although composed of several performers, may speak in one voice or break into distinct individuals. On the other hand, a character may extend temporally as well as spatially. There are traditions of portraying Hamlet, for example, that allow one to speak of Hamlet in the style of Burbage, Betterton, Kean, Macready, Kemble, and even Sarah Bernhardt, to name but a few historical examples. And yet this tradition of performing is not immediately apparent to either actor or audience. The craft of performing is a competence that one learns, a bodily ability or technique that one is initiated into by others.

Performer-Character Reversibility

For both the actor and the audience, performing is a bodily technique in which one learns competence. If this were not the case than there would be little hope of a performer presenting a better characterization than in the first reading of a part. Likewise, audiences would expect the same entertainment and rituals to be repeated. But bodily ability surpasses a finite elaboration of a set of techniques. The greater an actor or an audience's ability to differentiate

styles or idiolects, the more difficult it becomes to say that there is a limit to the way things can be done. Merleau-Ponty (1962: 189) remarks: "Behavior creates meanings which are transcendent in relation to the anatomical apparatus, and yet immanent to the behavior as such, since it communicates itself and is understood. It is impossible to draw up an inventory of this irrational power which creates meanings and conveys them." Hence it is not sufficient merely to compile a typology of modes of sign production in order to explicate the semiotic pretense involved in creating aesthetic text. Pretense in theatre depends upon a bodily ability which is the craft or technique of performing.

The technique of performing is that bodily ability to reproduce the reflexivity of actor and audience in being a performer and character. By this ability, Merleau-Ponty (1962: 105) writes, the actor and the audience "extricate their real bodies from the living situation to make them breathe, speak and, if need be, weep in the realm of imagination." Performing as technique establishes a relation between performer and character by distinguishing them -- outlining them, if you will -- from actor and audience reflexivity. This is why silence and motionlessness are such accomplishments in performing. Silence and motionlessness create an outline, provide a horizon in which performer and character appear. This silence, then, is meaningful because it is a precise demarcation in a world of things already said and done. As actor and audience learn and refine these sedimented distinctions they are able to suggest character, to an even greater extent, by what they do not do as a performer (Grotowski 1968). Hence the performer develops a "visible restraint" which indicates a wealth of technique awaiting his command.

It is in learning this competence that actor and audience come to distinguish performer and character. This bodily ability serves as a technique by which intentions and actions are attributed to either performer or character in performing. Performing as technique establishes a pattern of interaction between performer and character in the context of actor-audience reflexivity. In the following section, I specify this technique or pattern of interaction as a digital logic of bodily ability in contrast to talent.

Gesture: A Semiotics of Performing

There is little argument in theatre about identifying

performing as both talent and technique. Ultimately, and eventually, the questions arise when one speaks of their relation in performing. I would like to suggest that by interpreting talent and technique as bodily capability and ability, respectively, it is possible to specify a logic of performing that accounts for their embodiment in performing. Further, a bodily logic of performing situates both talent and technique in a common gesture.

Talent describes the bodily capability of performing in theatre. This bodily capability of performing situates the reflexivity of actor and audience which is social embodiment. Gielgud (1963: 6-7) illustrates the reflexivity of actor and audience in choosing to undertake a particular role.

Sometimes I read a play in which I am offered a new part, and suddenly I imagine, 'Oh, I believe I could do something with this.' It is usually a very instinctive feeling, and has nothing to do with understanding the details of the whole work. I suddenly see the way I am going to look, the way I am going to speak, the way I am going to move. If I did not imagine all this so vividly, I would never dare to undertake it.

In this instance, Gielgud performs as both actor and audience in suddenly visualizing a posture that he is capable of living. Gielgud's talent is indicated not by whether he can actually perform as imagined but by his simultaneous response as both actor and audience. Actor and audience form a system which is lived as bodily reflexivity that constitutes a pattern of transaction in performing ("I see the way I am going to look, speak, and move.").

This pattern of transaction in the reflexivity of actor and audience grounds the technique of performing. Based on one's bodily capability of response as actor and audience, it is then possible to develop performer and character as parts of a systematic whole. Whereas talent constitutes a response that is systemic in actor-audience reflexivity, technique constitutes a distinction of abilities between performer and character. Again, Gielgud illustrates the interaction of performer and character as technique in performing Hamlet. Gielgud (1939: 173), at this point, describes the series of actions necessary for him to portray

Hamlet. One such section begins with:

. . . The arrival of the players, easier again, natural, true feeling, but the big soliloquy is coming up in a minute, one must concentrate, take care not to anticipate, not begin worrying before hand how one is going to say it, take time, but don't lose time, don't break the verse up, don't succumb to the temptation of a big melodramatic effect for the sake of gaining applause at the curtain -- Nunnery scene.

Thus the actor is propelled through the play with a multitude of concerns and problems that all interact in a precise pattern. Should he spend too much time on any one aspect, the rest of the play (and possibly his characterization) will rush past and leave him behind. It is for this reason that performers speak of being "on top of" a character or having a "hold" on a character. Without this ability to "hang on," performer and character would dissipate in the flurry of interaction.

As suggested earlier, both talent and technique may be considered as logical sequences which are analogic and digital, respectively. In human communication, these two logical sequences are accounted for by Communication Theory and Information Theory. Richard L. Lanigan (1979) articulates these two theories as a sequential complex of message, code, and context. As a way of clarifying the logical grounds of talent and technique in performing, I would like to suggest that talent is best accounted for by an analog logic (as in Communication Theory) and that technique is best accounted for by a digital logic (as in Information Theory).

Talent may be defined as a sequential complex of code, context, and message. Lanigan (1979: 296) specifies that "code is 'both sign presence and sign absence,' context is 'sign presence,' and message is 'sign absence.'" In terms of the preceding analysis, code is the bodily reflexivity of a person as both actor and audience. The bodily reflexivity of a person as both actor and audience regulates the context of performing as play. The play of performing constitutes message as the absence of play which is not-play. Thus talent, as bodily capability, constitutes performing as a choice in context.

The response of actor and audience always occurs in a context of lived-body experience, that is, the play of performing. The actor and audience do not need to wait until the performing is completed to decide how they "feel," for their response is immediate; it is the lived reality of bodily capability. The use of response as bodily capability should not be taken to indicate a reaction by either actor or audience. The response of actor and audience in the play of performing is expression which is simultaneous and complementary in bodily reflexivity. The audience does not need to reflect upon what the actor is doing in order to respond, for the audience sees the actor in performing. The audience lives the actor in expression. In similar fashion, the actor does not reflect on the audience for he lives the audience as a bodily capability in the play of performing.

Likewise, technique may be defined as a sequential complex of message, context, and code. In this case, Lanigan (1979: 295) specifies that "message is defined as 'sign presence,' context is defined as 'sign absence,' and code is defined as 'either sign presence or sign absence.'" According to the discussion of pretense in theatre, message is the presence of pretense in overcoding. The absence of pretense constitutes a context of undercoding which is the pretend-not. Hence pretense regulates the real as a code of either performer or character. Technique, in this instance, establishes the context of choice but not any specific choice. Technique provides the actor and audience with the choice of a context that constitutes a boundary of performer and character but does not "fill in" either performer or character choices. It is for this reason that aesthetic text is described as an empty form (Eco 1976).

The phrase "empty technique" does not denigrate technique (although it might apply to a performance), but reveals its very usefulness. It is because technique is empty that an actor or an audience can learn competence in performing. Bodily ability in theatre improves with the experience of pretense, although it may equally foster a kind of pretentiousness that accompanies the highly skilled, but inappropriate use of technique in performing. At a very basic level, there is not much one can do to learn competence in performing short of going to the theatre and doing theatre. Despite numerous rehearsals, the experience of being on stage cannot be taught without going out in front of others.

The talent or bodily capability a person lives in performing is an expression of actor-audience reflexivity. Performing develops as technique or bodily ability through perception of performer and character. Performing in theatre embraces both capability and ability in a common gesture. Merleau-Ponty (1964: 168) suggests this entailment of technique in talent when considering the problem of mirror images.

Like all other technical objects, such as signs and tools, the mirror arises upon the open circuit [that goes] from seeing body to visible body. Every technique is a "technique of the body." A technique outlines and amplifies the metaphysical structure of our flesh. The mirror appears because I am seeing-visible [*voyant-visible*], because there is a reflexivity of the sensible; the mirror translates and reproduces that reflexivity.

Performer and character arise from the reflexivity of actor and audience in performing. Talent generates technique according to a bodily logic of capability and ability. The talented technique that unites expression and perception in performing is what Merleau-Ponty calls gesture. Performing is a certain way of bringing the body into play such that pretense of performer and character emerges as a pattern of behavior that surpasses itself in a gesture towards others. Performing constitutes a bodily logic of capability and ability that surpasses itself by finding itself in gesture. Indeed, a person expresses and perceives performing as meaningful in the bodily logic of gesture. The bodily logic of gesture constitutes a semiotics of performing.

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THE SEMIOTICS OF GODOT COMPARED WITH THOSE OF THE
RUSSIAN ICON

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Boris Uspensky, in his work, The Semiotics of the Russian Icon, demonstrates that the ancient Russian icon may be deciphered through the language of artistic devices that the artist uses in it to convey meaning. These are devices that simultaneously embody both the viewpoint of the artist and that of the viewer. Uspensky is able to do this by analyzing the icon's composition, a pictorial construction dictated largely by canon, strict limitations on subjects, and the availability of models in Russian pattern books, but also influenced by changing conventions of perception. Through the study he makes, he uncovers a special system of symbolic representational means specific to the icon which he refers to as "language." Believing that the system used in the pictorial work may be broken down into levels similar to phonological, semantic and grammatical levels of a natural language, he considers the most important level of analysis to be that of the means the icon artist uses to transmit spatial and temporal relations to the painting. This he compares to the phonological level of language. Another level of analysis he identifies is linked to the means and manner employed to depict certain objects. This he compares to the semantic level of language. Still another level he investigates is the one in which ideographic signs of the language of painting occur. These are signs whose significance may point to larger concepts. This level he compares to the grammatical level in a language.

If a mental leap can be made from the icon and its picture plane to a dramatic work of art and its plane of expression, one discovers that the semiotic system Uspensky describes

has its parallels in Samuel Beckett's famous two-act drama, En attendant Godot. Dealing with a problem facing universal man in the world that surrounds him, the theme engages people in a way that transcends boundaries of country, ethnocentricity, or caste. Every spectator may perceive in the play life shown as a continual movement back and forth between two constantly present poles: one a vision of wholeness and meaningful pattern of cosmos, the other a vision of chaos. Beckett shows that this movement is born from the tension between a desire on the one hand to construct mental pictures of reality which will make it intelligible, and a need on the other to criticize these in order to see if the conceptions correspond to reality.

In the present paper, I attempt to demonstrate the applicability of Uspensky's theory to this play through an examination of its semiotic devices, specifically, its spatial organization (or phonology), its visual impression (or semantics), and its semantic syntax (or grammar).

An analysis of the spatial organization of the ancient icon by Uspensky discloses that the painter relies on a whole complex of specific perspectival devices to transmit spatial characteristics of a world on the two-dimensional surface of the picture. This complex, outlined in the Russian manuals of icon painting termed podlinniki, leads the artist to place himself and the viewer within the represented space surrounding the subject he is depicting. The result is that his representational techniques embrace a visual impression received from a dynamic visual gaze from a multiplicity of viewing positions.

Beckett, a modern-day artist who works within the limitations of time, place, and action peculiar to drama, rather than those peculiar to painting, nonetheless employs the sum of a multiplicity of viewing positions. In the manner of the icon painter, he executes a "painting" that encompasses three dimensions within its invisible frame: (a) the stage setting where the main actors play, (b) the auditorium with its spectators, and (c) the wings where other actors await their cues.

In addition to the internal point of view available to the viewer of icon painting, Uspensky identifies a viewpoint that can be taken up external to the representation, that is, the viewpoint of the outside observer. This point of

view is also discernible in the drama, En attendant Godot. Similarly with Beckett the spectator of Beckett's work may consciously choose to view the play from outside or from within the frame. The existence of the external viewpoint along with that of the internal provides in the play an opposition between indirect and direct internal perspective.

Within the organized space of the ancient icon, figures occupy places according to aesthetic and ideological concepts. For example, the icon artist has painted the Virgin to appear at the right side of Christ or at the right of a symbolic object representing Christ. This placement carries a semantic load for the viewer, expressing without words the high esteem in which the Virgin is held and encouraging him to adopt the same attitude of veneration.

Beckett uses similar devices in his system of organization to convey spatial and ideological concepts. He limits his stage requisites to the radical extent that when the curtain rises on Godot, the stage contains mainly empty space, brilliantly lighted. Then the bleak setting of evening on a country road with a lone, bare tree unfolds. Near the tree and dressed in the tattered garb of the vaudevillean clown, Estragon, one of the two main characters, sits on a mound trying to remove his boot as his companion, Vladimir enters. This tableau becomes a symbol that provokes in the spectator a state of mind appropriate to the theme of the play he is about to see, the theme of nothingness.

The device Beckett uses to extend the spatial dimensions of his play into the auditorium is to create a dialogue and actions that involve the spectator directly. Beckett's actors do not pretend their stage marks the boundaries of the imaginary world in which they perform. They recognize the spectator watching them as part of their world. For example, at one point, Estragon advances to the proscenium, halts facing the auditorium, and says 'Inspiring prospects.'

The device Beckett employs to keep the offstage world, the wings where other actors wait, before the attention of the spectator is a continuous stream of exits and entrances, from small ones like Vladimir's necessary trips, to the spectacular, noisy appearances of Pozzo and Lucky, to the quieter, troubling entrances of the Boy, bearing his equivocal message from Godot towards the close of each act.

According to Uspensky the technique of summation of several possible visual impressions into a single point of view plays a major role in medieval art, representing the fundamental structural feature of the ancient picture. This summation includes the impression of the artist himself from within the work and the impression from the external observer which the artist has melded into one. In the icon this multi-lateral embrace gives rise to perspectival deformations resulting from the attempt to depict the volume of an object or movement in time within the world of the icon. The viewer is left to unify the features of perspectival deformations into a single whole.

Examples of these perspectival deformations include the figure of the trumpeting angel in the frescoes of the Cathedral of the Assumption in Vladimir or the depiction of the ship in a sixteenth-century life of St. Nicholas in which the bow of the ship is shown from below, the stern from above. Another is the representation of the beheading of St. John the Baptist in which the head is shown twice -- at different moments in time. These icons belong to the category of icons called 'complex translation.' Their characteristic feature is the repetition within the limits of a single representation of a certain figure in various positions or situations, that is at various moments in time.¹

Beckett's play seems to fall within the category of 'complex translation.' The fundamental structure of Godot is circular. Inside his representation, Beckett creates a cyclical world in which endless cycles of time are represented. He accomplishes this through the device of doubling and the endlessly repeated pattern, the cosmic rhythm of light and dark. The play's two acts take place on the same day with the same determination. The identical endings of each act emphasize the circularity of the whole structure. "Nothing ever finishes, and everything begins again. Circularity implies never ending. As a matter of fact, the play itself never really terminates, but is performed again night after night as the two main characters realize, observing, 'We'll come back tomorrow. 'And then the day after tomorrow.'"2

Looking further into the circular structure of the play, one discovers that dialogue and physical gestures also prove to be circular. Vladimir perpetually peers into his hat, "shaking it, and putting it back on again. In thirty-three

separate stage movements, Vladimir, Estragon, Lucky exchange hats."³ Similar verbal and behavioral repetitions characterize the entire work.

Watching the drama unfold, the spectator is left with the visual impression of the play's spiraling down to almost nothing. Beckett's structural devices disclose the monotony and futility of the eternally repeated ritual enacted on that deserted country road.⁴

Lastly, we examine the grammatical level of the icon which Uspensky delineates as having ideographic representational devices. These devices comprise those he calls 'extra-personal' and 'personal' significations, the hierarchical depiction of figures in the icon and the inclusion of titly which serve to identify it. Uspensky posits also, for example, that the 'extra-personal' element in the representation of a saint, particularly his clothing, usually consists of signs characterizing not his individuality, but the order to which he belongs, whereas the 'personal' elements are individual signs serving to identify a particular saint. These with hierarchical representation and titly combine to make up the semantic syntax of the icon.

Paralleling the development of semantic syntax in the icon are the devices Beckett uses in *Godot*. The ideographic representations found in his play are (a) his recreations of the archetype of the Clown, (b) the hierarchical scheme of the play, and (c) the sparse dialog he has written for his characters.

The archetype of the Clown lends itself as a vehicle of expressing the unfolding of the elusive self of man throughout his wanderings between knowledge and ignorance.⁵ Garbed in costumes of Edwardian music hall comedians, the clowns represent for the spectator other clowns: Laurel and Hardy, Charlie Chaplin, Sancho Panza and Don Quixote, Pierrot and Harlequin.

Another facet of the clown characterizations is in the onomastic development. One finds that the functions of each is revealed through his name. The names, Didi and Gogo, reflect their characters' primary functions; namely, telling (French, dire) and going (English, to go). In fact "gogo" is simply colloquial French for a naïve being, a booby.⁶ Vladimir means "ruler of the world," a name that suggests

the aspiration of intellect to master the universe by reducing it to knowledge, and "Estragon" is the French word for the herb, tarragon, a fitting name for an earthbound character with persistent physical appetites.⁷ The name, Pozzo, is the Italian word for well or hole, making an inference to someone who has emerged from the depths of the earth, or it suggests "puzzo" meaning stench and "posso" meaning "I can" or "I am able;" or yet another signification, "Gozzo," meaning excessive eating or revelry.⁸

In addition, Pozzo and Lucky represent other aspects of man. As Pozzo is a landowner and slaveholder, and Lucky is his slave, they may be reduced to symbols of an economic relationship or that of the exploiter and the exploited. On the other hand, Pozzo, can be interpreted as a symbol of the mass audience controlling and debasing the arts (since Lucky is a dancer) or as a nonintellectual world using thought as a plaything (since Lucky is a philosopher and theologian).⁹

Uspensky argues that the semantically more important figure is depicted as relatively more immobile whereas less important figures may be depicted in motion. This mode of depiction is exactly that in which Beckett arranges his characters; Lucky and Pozzo and the Boy, are subordinated by their entrances and exits on-stage.

The Beckett words do for the play what titly do for the icon; they serve as an identifying and unifying force. They constitute the dialogue, sparse but rich, that emphasizes the conflicting unity of his two pairs of clowns. It consists of poetic compositions of verbal repetitions and silences. It is the language of the clown, an idiom containing the quasi-scientific, quasi-literary, and quasi-genteel jargon of a pompous lecturer.

As do the devices used in painting the ancient icon, Beckett's spatial arrangement, his visual impression, and his semantic syntax combine to achieve a communicative function, that of revelation. Harking back to Uspensky, one may say that the ancient icon seeks to involve the viewer, the supplicant in worship. Beckett's work, a different type of an icon of the theater, undertakes systematically, on distinct and distinctly identifiable semiotic levels, to involve the spectator in deep reflection about the "real" world in which he lives.

FOOTNOTES

¹Uspensky, B., "The Semiotics of the Russian Icon,"
The Peter de Ridder Press, The Netherlands, p. 51.

²Gluck, B. R., "Beckett and Joyce," Bucknell University
Press, Lewisburg, p. 149.

³Ibid., p. 151.

⁴Ibid., p. 119.

⁵Busi, F., "The Transformations of Godot," University
Press of Kentucky, Lexington, p. 18.

⁶Ibid., p. 18.

⁷Webb, E., "The Plays of Samuel Beckett," University of
Washington Press, Seattle, p. 27.

⁸Busi, "Transformations," p. 78.

⁹Webb, "The Plays," p. 28.

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THE TELLER AND THE TALE: SOURCES OF CREDIBILITY IN
THE SHORT STORY

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The problem to be considered is that of the basis for the sense of validity in a narrative. Why does a reader accept a story as credible? The willingness of a reader to enter the narrative universe is a complex process, and the function of factors both internal and external to the text. At the most immediate level this complex of factors includes the reader as a member of the culture and as a reader of a particular literature as well. This membership entails awareness of the conventions which must be met by a particular form. A reading begins then, with some knowledge of that to which the text refers, and some expectations of the form the text will take.

A narrative consists most simply of an account of an event or an experience which changes in some way, creating a crisis which is then resolved in some way. It is this crisis point and resolution which are the test of credibility. The reality of a story and its events are realized at this point. As readers we know that being possible in fact does not make a narrative event interesting or believable. Our general understanding of human behavior and of what is humanly possible is a necessary but insufficient condition of understanding and accepting as credible the actions and attitudes of characters in fiction. The actions and behavior of the characters must be consonant with our understanding of them in their specific context, the one in which the narrative places them. The overall message of the text, the explicit and implicit statements as well as the reader's inferences, constitute this context. Crucial to this context is the inclusion of those thematic elements which are to be resolved.

As a linguist my interest is in the specific language features and their arrangement which contribute to the construction of these thematic elements.

Since writers exploit the language in very different ways, the determination of language features which are of significance in a narrative crisis is assumed to be text specific.

The story to be discussed is The Yellow Wallpaper by Charlotte Perkins Gilman. First published in 1892 it recounts the onset of psychosis in the young woman narrator. Gilman was a feminist and a greater polemicist than writer of fiction. Despite this fact, the differences in social and literary conventions of that time and our own, and the story's gothic overtones, it still remains a compelling story.

The story, briefly, is this: a young woman, a writer, is living in a rented country estate with her physician-husband, John, their baby, and her sister-in-law. This isolated setting is meant to be therapeutic for the narrator who is suffering from depression. Her husband has prescribed complete rest, so the narrator spends her days in a room at the top of the house. This is a proper gothic setting for what follows.

The narrator is imaginative; John is a realist--described by the narrator as ". . . practical in the extreme". He distrusts as dangerous to her the lure of the world of fantasy. Although the narrator wants to work, believing that writing would relieve her mind, medical authority insists upon complete rest. She disagrees with this prescription, but she complies.

When, contravening her husband-physician's advice, the narrator tries to work, she finds that work exhausts her. She understands that the exhaustion follows from the demands made on her by being "sly", or facing strong opposition as preconditions of continuing her work. To be "sly" is clearly not an acceptable behavior.

The narrator tries repeatedly to explain her need for work and more stimulating companionship, but her husband insists that she rest. Growing more passive and depressed, she sets herself one intellectual exercise. She will figure

out the design principles which underlie the pattern in the detested yellow wallpaper in her room. Her descriptions of the paper reflect for the reader the fact that the chaotic pattern is the target of her anger and frustration. She is frightened by her responses when she sees a figure, "like a woman stooping down", behind the paper. Her appeal to be taken away from this house is denied. She is negated by all the authority of 19th century convention and her physician-husband. "So of course I said no more on that score . . ." This marks the crisis point. She is, quite appropriately, frightened by her own perceptions of the paper; confronted now with her husband's continued inability to understand, she is defeated.

The narrator is left to choose total passivity or to choose the pursuit of a new and secret goal, deciphering the meaning of the paper and the relationship of this strange woman to it. The story ends with the narrator freeing the woman, whom she now identifies as herself, from behind the paper.

That she is thwarted in each attempt to gain acceptance of her mode of viewing her situation is not sufficient reason to become psychotic. The narrator is neither a totally submissive woman who slips quietly into psychosis, nor is she a woman of steel broken by her imprisonment by a cruel husband. John is not a cruel husband. He is, one thinks, a bit obtuse but he is not cruel. Either of these alternatives would have produced a quite different story. How then, are we to understand how it is that she becomes mad?

The story can be seen to comprise a series of oppositions as elements which must be bound together to make a coherent narrative. The narrator's openness and desire to make her feelings clear is posed against need for secrecy if she is to avoid opposition. She is posed against John as the representative of her social reality in the oppositions of work vs. inactivity, imagination vs. reality, companionship vs. isolation. These explicit oppositions do not provide motivation for the progress of the story.

The dominant motivating thematic conflict, resolved in her final madness, is less explicit. Ironically, her madness is an assertion of herself. The narrator has identified herself throughout with an internal conflict; the wish to be actor vs. the constraints of her situation. It is the case

that she is, in this narrative context, very limited in her possible courses of action; flight, defiance, persuasion or death are all rejected as means of changing her situation. The form of her delusion, that a woman is imprisoned in the wallpaper is a function of her social reality and of this dominant thematic conflict. She can now act and escape the constraints of her situation.

The supporting evidence for the present reading of this thematic opposition lies in an examination of the text. This evidence is on two levels: the sequence of topics; and the shift in the use of verbs.

Though the narrator clearly has her own point of view, she has at the same time turned away from a direct confrontation with her husband's differing view. Each time there is a possible overt conflict in her relationship to John and his authority, she turns her attention to a description of externals. The form of the story consists of alternations of blocks of description; the view, the room, the wallpaper, separated from each other by her descriptions of her thoughts and feelings -- her internal state. The sequence of topics makes it clear that avoidance of conflict is a central concern, while willing compliance is not the solution.

The review of first person verbs established sets which are associated with significant changes in the course of the story. The four sets were isolated on basis of the narrative function of the statements.

The first set is descriptive and identifies the narrator's state in a direct and explicit way;

"I am sitting by the window"
"I cry all the time . . ."
"I wish I could get well faster."
"I creep by daylight . . ."

The second and third sets are related to her relationships to others. The second, small set comprises qualified assertions.

"Personally, I disagree with their ideas . . ."
"Personally, I believe that congenial work . . .
would do me good . . ."

The narrator disagrees with the evaluations of her situation imposed upon her by her physician-husband; she has a different view. The use of "personally" to introduce the assertion of disagreement limits the assertion. It does not introduce an unqualified claim; this ambivalence is further indicated by the statement, "But what is one to do?" which follows the two above.

The third group indicates the narrator's actions as consequences. These make it clear that she complies with the wishes or requests of others but does not endorse these requests. The repeated use of the term /so/ indicates that she has acted as she has because of a preceding action or request; in this context these are the actions or wishes of others, not her wishes or conclusions.

"So I take phosphates or phosphites . . ."
"So I will let it alone and talk about the house."
"So I take pains to control myself . . ."
"So of course I said no more on that score . . ."

The final group of narrator's statements is the group of unequivocal assertions made by her;

"I know something of design . . ."
"I never saw worse paper . . ."
"I want to astonish him . . ."
"I caught her . . ."
"I watch John . . ."

Sets two and three appear before the crisis point of the story, before the protagonist decides to say no more on the subject of her fears. These hedged assertions and the compliant acts disappear. Direct assertions have appeared throughout the text in relation to externals, i.e. her responses to the room and the wallpaper. She has changed markedly when the object of her statements is one of the other characters; an external too, but an external element with a mind and a defined personal note in her life.

"I watch John . . ." a significant change in the use of the verb /watch/ now appears. Originally the verb appeared in relation to the paper and its disturbing design: "I watch it always", and signaled to us that she was suffering some strange thoughts. Now the verb is used for John and Jenny.

There is a decrease in the relative frequency of first person statements as the narrator defines her adversary, the pattern of the paper, " . . . the pattern is torturing.", "It slaps you . . ."

This enemy is formidable, but the context is exciting, interesting. "I don't sleep much at night for it is so interesting to watch developments . . ." She is determined that she will solve the meaning of this strange environment. She has taken control of her domain. She has established her autonomy, but the price is madness.

Why do we take seriously the account of a woman who devotes her energies to deciphering wallpaper designs, and why look beyond the simple fact that a woman who was ill became more so? We know that people lose their sanity -- and seek the answers for the major problems of their lives in the patterns of wallpaper. This is certainly part of the answer.

The author's construction of the text is as important as our psychological knowledge in our accepting the validity of her tale. The paradoxical development of the protagonist to strength and self directed action at the cost of her sanity is discovered in the domain of meaning established by the specific structural choices the author has made. The story has integrity on both the psychological and the linguistic-thematic levels.

THE GUINEA PIGS BY LUDVÍK VACULÍK:

INTERRELATION OF AREAS OF REFERENCE

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Ludvík Vaculík's novel Guinea Pigs is one of the most profound and most successful novels of the 1970s in Czechoslovakia. Published first in the underground Edice Petlice in 1973 (Morčata), later in Toronto by 68 Publishers in 1977, the English translation appeared in New York by the Third Press in 1973. The novel was written in 1970 and in 1976 it won the George Orwell Prize, awarded by Penguin Books to the best literary work commenting on social issues.

I will attempt here a description of the semantic potential of the novel in its main features. The novel is based to a great extent on an imaginative freeplay of meaning which is quite unique within Vaculík's works and represents one of the finest literary experiments of the 1970s.¹

The story is introduced by its narrator, the "banker" Vašek, as a simple tale about pets told to children (p.18/10)². However, from this very point on, it is filled with "digressions." Three main areas of reference are established: the bank where Vašek works; his family's life; and the topic "proper", i.e. the guinea pigs. It is obvious that Guinea Pigs is a metaphor of the life in a totalitarian society and of the mental processes that members of such a society experience. This effect is reached by the interchange of several narrative codes. The underlying narrative code is a serious one and it is complemented by a naive narrative code and a playfully ironic code on one hand and by an absurd narrative code and a fairy tale code on the other. The free switching of the codes underlies a free switching of the topics. Whenever the discussion touches upon some "unpleasantness," the

narrator switches to another subject. Whenever frustrated at the bank, Vašek turns to the animals because "they are nicer and more relaxing, too" (p. 27/19). On the contrary, when there is trouble with these, he returns to the bank: "Things look pretty bad in the bank, but there it isn't my fault" (p.43/37). And so back and forth, even with other topics, e.g., "But, my dears, let us not even talk of God, but rather about pets, they are smaller and clearer" (p.28/20). Or "But let's not talk about gallows, children, let's talk about pets, they are nicer" (p. 57/52). In this way, the story ends up encompassing much more than might be expected from the project announced at the beginning: a story about animals for the children. By the same token, the rotation of areas of reference, this narrative, "syntactic" device which as it were "sews" together the apparently heterogeneous materials, becomes also a sign vehicle for the perceived negative aspects of the reality. In his circular escape from one topic to another, the narrator creates a highly limited and closed world that is literally without escape. A syntactic device thus turns into a semantic, referential one. Apart from this "metamorphosis", the explicit switching of topic operates on a conative level: each time the author appeals to the readers to participate in this change of subject and not to participate in the unpleasantness of the previous one. This conative device thus turns into another referential one, namely it invokes giving up the responsibility.

While the switching of the topic remains primarily a syntactic device with multiple semantic implications, the consistent addressing of the reader is primarily a pragmatic device turning into a referential one. The constant "my dear young readers," "children," "boys and girls," "dear hearts," "you little girls," and so on produces a "misleading address", which becomes a sign vehicle for an insinuated innocence. The author constantly transposes the reader into a state of innocent childhood. As we shall see later, this creates a strong opposition with the guilt meaning which is mounting in the course of the book.

The explications, especially of foreign words, are an important part of the "children oriented code" and also illustrate the constant play with, or even transgression of, the base register:

"One Summer we discovered two little lakes in Sedlec,

right near the Vltava Embankment. The Embankment, children, is a stone wall, with heavy iron rings where they used to tie boats under Austria. Austria is -- but let's leave that for some other time." The author makes here use of the metalinguistic function of language to create the illusion of a child oriented discourse as well as to refer to the cultural context by using an incomplete explanation of the word "Austria" (a zero sign) tacitly comparing the situation nowadays and under the old Empire.

The handling of narrative voice and point of view follows the same pattern and offers an intriguing design. The work starts as a first person narrative. However, from the very beginning, the third person intrudes unobtrusively when a possessive pronoun of the third person is used instead of the first: "for people like Eva and myself /. . ./ whereas for their children" (pp. 11-12/4), where "their" refers to "Eva and myself." Strange distance is put between the narrator and himself as a character. At yet another point, the first person plural is used: "We're saved" (p. 123/118), whispers the narrator in relief after he almost drowned the guinea pig; thus, the two are emotively identified. A similar incident, though in a playful register, occurs earlier (p. 58/53). The real surprise, one that disrupts the established perspective, comes towards the end. The narrator suddenly starts worrying about the limits of the first person use with regard to what the story is about to tell next:

"I am discovering that I made a mistake at the beginning in my decision to write in the first person singular. I am at the end of the possibilities granted by it. No author would find it easy to write truthfully, 'When its head appeared above the water's surface, I pushed it under again, holding it as long as the bubbles kept rising to the surface /. . ./' So far, any author who has ever done this to anybody has written about it in the third person singular, as if it had been somebody else who had done it, using this simple trick to detract the attendance of readers and critics from his deeds to his writing." (pp. 138-39/134-35).

He ponders the development of his literary project, which became alienated from his original design, and decides to rescind his personal responsibility for the story, to put some distance between himself as character and as narrator, and to hide as it were behind the alibi of the impersonal form:

"I started to write this book in my own person, because I thought that it would be a book about the fact that we've got guinea pigs and how we observe them and how they amuse us. At Christmas time, no one could have guessed where it would all end. What should I do now? All I can do is to switch to the third person, and when I get time, someday, I'll rewrite the beginning." (Ib.)

However, only one page later he lapses, as if inadvertently, back into the first person (p. 140/136). Then, suddenly, the narrator splits into two: "The banker and I laughed softly," and the perspective starts jumping playfully back and forth for a while (pp. 153-54/148-49), only to settle once more on the first person. When "re-reading" the last chapters, Vašek "realizes" his "over-sight": "Now, having re-read it -- and it's almost morning -- I observe wanly that the silly banker forgot to write in the third person again. He'll do better tomorrow. I'll see to that" (p. 159/155). The strife of narrative grammatical persons borders here on absurdity and self-parody. Henceforth, the strictly observed third person makes it possible for the narrator not only to tell about his own death but to close the lines of the story, ending the fairytale-like sentence referring to himself: "But he never came and they never heard of him again" (p. 170/167). This metatextual play becomes a complex sign vehicle for giving up responsibility, as well as for alienation from oneself on one hand, and impossibility to escape the responsibility, as well as losing control on the other.

The unevenness of the structure is motivated as an intervention of something beyond control of the narrator, something which puts "out of joint" his project, undertaken "in his own person," something that causes an apparently simple subject, as if incidentally, to set gyrating all his universe, overwhelming him. Within the cultural context, there could not be a more accurate portrayal of the "Prague Spring," set into motion during the eventful Christmas of 1967. On the other hand, the alibistic aspect of the switch has clear connotations of wrongdoing, linked directly to Vašek's increasingly inhuman experiments with the animals. This connotation, of course, subverts the budding allegory, in which the author of Guinea Pigs played a prominent role.

However, it would be an error to think that this unevenness is "natural." It is produced, controlled or, at least, accepted by the highest narrative instance, by the "implicit

author." Let us, then, consider further the effects. The "laying bare" of the layers and phases of the creative process causes a state of giddyness, of bewilderment, and gives to the work a kind of a fourth dimension: the unfolding of the context turns out to be as well an archeology of its own creation. The violent conflict with the "unfinished" structure and the intrusion of the metatextual, self-critical commentary exhibit ostentatiously not only the anti-illusionist but also an apparent anti-literary character of the novel.

The central compositional semiotic device, the unevenness of narrative structure, is paralleled by the central metaphor of whirlpool on the thematical level.

The whirlpool (Maelström) and the central character Chlebeček, who is also called Maelström because of his prediction of a total economic disaster which he names in this way, enter an interesting semiotic interplay. Both turn out to be destructive forces: the whirlpool as a natural phenomenon, Chlebeček as a social phenomenon. Both stand in the center of the semiotic structure of the novel: Chlebeček is the central, inaccessible person, Maelström the central intriguing phenomenon. Both are crucial symbols for the undertakings of the main character and for the fate of the country. Chlebeček is the one who attracts Vašek into his last journey where he is to perish. He thus really personifies the Maelström. He destroys Vašek literally after having destroyed him ethically (Vašek gets gradually more and more insensitive to his pets, one of the crucial demonstrations of which is precisely putting a guinea pig on the record-player, creating thus a small Maelström for it.) Maelström, also called Moskoeström, becomes a heavily over-coded central sign vehicle of the novel. The meanings which it covers are related to each other as a cause and effect: 'loosing of control' - the literal meaning of a whirlpool turns into dehumanization, destruction, and literal death. Maelström though, on the other hand carries also the meaning of Vašek's quest for the truth: truth about the limits of his humaneness, responsibility, terror of death. Its positive meaning thus enters into a relationship of a dialectical antinomy with its negative meaning. It can also be viewed as a symbol of the fact that under the given circumstances, the quest of truth leads to death. Through this 'quest for truth' meaning, Maelström enters into a textual synonymic relationship with the other central sign of the novel, the guinea pigs themselves. They, too, represent the search for truth.

The bank, one of the two dominant thematic areas of the novel is introduced with little delay: "You will know the State Bank. It is a fancy building on Wenceslas Square, all marble on the outside, but don't let that fool you about the inside. Maybe all I need tell you is that sometimes, on the days that we bank clerks or bankers get to count out our salaries and tuck them in our billfolds, we keep casting uneasy glances towards the luxurious revolving doors to our bank, afraid that someone might come in to withdraw his savings. And our salaries, for all that, aren't much to speak of either. As the saying goes, barely enough to keep us from stealing. And for that matter, why not admit it, we do steal. But our efforts are desperate efforts . . ." (p. 10/2).

This is a world turned upside down. The facade (obviously still that of the First Republic or the Austro-Hungarian Empire) barely hides the inner mess. The clerks are designated frequently as "bankers." This might be consistent with the socialist slogan that workers are owners of the means of production, but the name is all that remains of the purported ethos. They have no say about what is going on in the bank, and their "ownership" has degenerated into attempts to steal as much as they possibly can. Throughout the novel, this activity attains grotesque dimensions. There is a tacit reference made to the current popular saying that he who does not steal robs his family. Of course, there are guards at the gates. But the result of their activity is even stranger: whatever they confiscate never returns to the bank and disappears completely from circulation. The narrator makes clear that this state of affairs he "has just inadvertently revealed," is a microcosm of the whole national economy. The rest of the society is only alluded to or is symbolized through some pertinent aspect of the bank. There are only allusions to the lack of freedom in society, e.g., social problems are discussed only unofficially: "Unofficial talk, loved ones, means when people get together /. . ./ by the tobacco shop and newstand. One day an elderly banker let himself be voicing this opinion a short distance away from the newstand, and they arrested him" (p. 25/17). The following commentary is characteristic for the point of view adopted, that of a "concerned citizen" but with a somewhat limited outlook. The result is a stylization with touches of irony and the absurd: "It was the only time anyone was arrested, but it only depleted the ranks of thieves by a total of one, so it didn't help much" (ib.). The effects are absurdly cut away from their causes and the values are set upside down. This is

one more sign of alienation that pervades the novel. Everybody is in a way guilty, so that the actual cause of arrest becomes irrelevant. A similar situation occurs when the "bankers" are exhorted not to steal any more. "Why us?" (p. 47/41), is their answer.

The approaching catastrophe in the world of Vaculík's novel can be only avoided if everyone has a barrel to save his life in the Maelström. Here an intertextual relation with the story by the "American economist Edgar Allen Poe" is made. This, as well as the intertextual relation with Kafka's Trial at the end of the novel shift the story into a surrealist, oneiric realm. It is precisely on the level of the intertextual play where Vaculík's novel develops surrealistic aspects. There are some other surrealistic passages in the novel, as the episode with the ritual sacrifice of the cat in order to save Pavel's life. Thus in the crucial situations: saving the life of the son, saving the country and in a sense "everybody" from a catastrophe, approaching the ultimate knowledge about the protagonist's guilt, an oneiric treatment of the topic takes place.

The revelation of the existential situation of the protagonist happens gradually through his experiments with the guinea pigs. Vašek notices first for some time that his colleague "banker" Karásek radiates unusual happiness. He learns incidentally that it is because of raising a pair of guinea pigs. A romantic idyll flashes once more. It is thereafter that Vašek brings home the first guinea pig as a Christmas present to his younger son Pavel. Soon Vašek yields to the temptation to observe, experiment with, and philosophize about it. It is interesting to note that all the experiments take place late at night and thus smack of clandestine operation. Also the diary where he jots his observations is kept secret. He starts as a well-intentioned, impartial scientist. But soon he is caught up in the fever of "scientific discovery" and subjects the experimental animals to ever heavier stress. Initially he does it to record and report their reactions, but slowly it becomes a means of discovering the truth about himself, about the limits of his own humanity, guilt, responsibility, and terror of death. The experiments turn into a "work on his own punishment" (p. 115/110). As he has unwittingly predicted, now he himself alternately cuddles and tortures the little animals. He oscillates between playing God (pp. 122, 140/117, 136) and feeling like a guinea pig himself (pp. 115, 119/110, 114).

He falls into an ever widening gyre of another quest.

A transformation of the opposition man vs. animal is that of God vs. man. Throughout the novel, the "scientific experiment" shifts towards questioning its own ethical implications, and these point towards the metaphysical level. "God would be an exemplary observer. /. . ./ Only God does not help or hinder anything--as if he were watching without seeing, or else seeing, with all his stocks in another corporation" (p. 28/20). One cannot experiment, watch or even just know without moral implications, God is pronounced guilty, "even if not a single mouse in this whole world believed in Him" (p. 140/136).

From "nice little pets" the guinea pigs grow monstrously in importance and from "real" animals, without ever ceasing to be such, into a polyvalent symbol. In this sense, the guinea pigs disappear as the announced subject, and yet they symbolically and literally bring all places, characters, and levels of meaning together, to become a catalyst of one of the fundamental maelströms of the novel. At the mercy of man, they turn into an allegory of man living in unfree societies and, on a metaphysical level, into an allegory of man "in the hands of God."

In the last chapter, the absurd, the oneiric, and the mythic blend into a masterful conclusion. After saving his son, Vašek gathers his courage for a final attempt to find the truth about the bank. He senses that his quest is absurd and that he will only come upon absurd, void symbols, like the barrel. But still he decides to go all the way, at least to be sure of whatever it might be. When he approaches the barrel, he is executed in a truly Kafkaesque style, before he can transmit his ultimate knowledge. But the meaning is more complex, the search for truth also turns into a discovery of one's own guilt. However, the ritual sacrifice of the protagonist is decided by himself as narrator and it takes place in a tour de force of fiction. This absurd ending loosens the grip both of allegory and of moralization and reaffirms the imaginative freeplay.

Conclusions

The novel is built on a semantic contrast between a simple story about animals, suggesting innocence and educational character and a Kafkaesque serious yet absurd trial of the guilty

conscience of the protagonist. The semiotic structure of the novel is centered around four prominent mechanisms: 1) The pragmatic mechanism: turning to an adult reader as to a child produces an 'advocating innocence' effect. 2) Syntactic mechanism: the explicit mutual canceling of the specific areas of reference becomes a sign vehicle for oppressive thoughts. Things are getting out of control, problem of responsibility, guilt, death, powerlessness, anxiety about the future, all these are expressed with the help of this polyvalent device. The fact that the canceling is mutual and turns in a circle, produces an effect of being caught. 3) The metatextual mechanism of switching between the grammatical persons and commenting on the production of the text creates a semantic opposition of responsibility vs. alienation. The promiscuity of this device in the book produces an effect of a loss of control. 4) Finally the basic referential level of the book consists in narrating about little animals which turns into a complex sign of both social and philosophical world of the narrator. It is a narration about the process of becoming guilty and finding out about that, which is in a sharp contradistinction with the mechanism of advocating innocence. Thus the compositional level and the thematic level of the novel form parallels as well as dialectical antinomies on the deepest level of this narrative discourse.

NOTES

1. There are two essays describing Vaculík's "Guinea Pigs" in the Czech language. Both have been published in Czech emigré journals: Pavel Tigrid, 1971, Ludvík Vaculík: Morčata. Rukopis (1970), Svědectví, Vol. II, No. 42, pp. 333-346, and Ivan Pfaff, 1972, Hlas domácího odporu: Absurdita, Proměny, No. 9, No. 3, pp. 83-91.
2. The reference is given both to the Czech edition (68 Publishers) before the slash, and to the English translation by Káča Poláčeková after the slash.

VII. FOURTH ANNUAL SYMPOSIUM ON EMPIRICAL SEMIOTICS

WHY THINK ABOUT A COGNITIVE PSYCHOSEMIOTIC THEORY?

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It should be stated from the outset that there will be no attempt, on my part, to actually frame a theory of cognitive psychosemiotics. Such an activity would be, in my opinion, premature. On the other hand, there is no reason why I cannot argue that such a theory would be useful to both fields, and should eventually be formulated. This will be my task, then; to argue that such a theory should eventually exist.

What are some of the reasons that such a theory would be useful? Of course, the theory should explain and predict findings which are currently either unexplained or unaddressed. But the theory could also serve the following purposes:

- 1) Such a theory should make explicit the overlap of concerns between cognitive psychology (CP) and semiotic theory (ST);
- 2) furthermore, the theory should demonstrate how ST formulations and findings could advance CP, and
- 3) finally, the theory should demonstrate how CP formulations and findings could advance ST.

I cannot speculate upon the findings and predictions of a theory which does not exist, but I can address the three areas cited above. In doing so, I can hopefully awaken interest in the pursuit of such a theory.

First of all, it should be pointed out that ST and CP are relatively independent disciplines. That is, they share

very few common practitioners, the research literature from either field has had little impact on the other, their models are couched in different philosophical positions, and so on. And yet, for all of this, their central questions are surprisingly similar. Mayer (1981) has written an excellent introductory work which presents the key issues of CP to the lay audience. He points out that CP is essentially interested in the following issues:

- 1) the general mechanisms of cognition, especially in regards to the processing of information
- 2) the processes of representation of knowledge
- 3) the resultant structure of representation, and
- 4) the strategies where by represented information can be brought to bear to solve problems.

Notice that the natures, processes and uses of representations, and the creation of representations, are central issues in CP. CP research further indicates that representation, utilization, and retrieval are not simple problems of storage and access, but involve active processes which are sensitive to prior structures of representations, context conditions, and so on.

It is clear to see that these essential concerns are also essential concerns for ST. And yet, the fields are not identical. Is there a fundamental distinction between these two areas? Of course. ST, in its most basic form, is an analysis of the logic of representations. Peirce himself saw the relations among signs, objects, and interpretants as logical relations, with each component of semiosis identified as a logical entity. CP is interested in the practical and empirical natures of representation.

Consider an analogous setting. Chomsky (1965) in his model of linguistics, postulated a competence-performance distinction. This distinction served as the starting point for modern psycholinguistics. I hasten to acknowledge that I am aware that both Chomsky's model and his competence-performance distinction have come under a certain amount of fire. This does not mean that the distinction did not serve a useful purpose. It opened up a whole new avenue of research in psychology, precisely because it allowed researchers to ask and test new and interesting questions.

How, then, in general, would a cognitive psychosemiotic theory operate to the benefit of both fields? It would allow for the following:

- 1) a revised model of representation for CP, based upon semiotic principles, which would allow for new and different avenues of theory and testing, and
- 2) a burgeoning empirical data base for ST, which should in turn lead to a more sophisticated view of representations and semiotic processes in general.

Let us now look at the current state of work in each field, to see if my foregoing conclusions are at least plausible.

What, for example, can ST offer CP? To answer that, let us inspect current theoretical paradigms in CP. It is important to realize that the cognitive approach has gained much of its strength by serving as an alternative to the behaviorist approach. CP goes beyond the constraints of behaviorism to assert that carefully controlled observations of behavior patterns (or simulated patterns of behavior) can be used to infer the working of internal, or mental, processes. However in many cases, these models of internal processes are still grounded in the associationistic tradition. The cornerstone of CP, in many people's eyes, is the information processing model. In this model, information serves as input, where it is subsequently encoded in short-term memory (STM) and passes on to an organized long-term memory (LTM) store. The resemblance of the system to the operation of a computer is not accidental. CP then searches for those "internal computer programs" that fuel the process.

This model has proved to be very useful, but a moment's reflection can show some shortcomings. In order for a representation to be formed in LTM, the input information must be processed. But in what manner? Consider a simple paragraph. This paragraph conveys a great deal of information at a variety of levels--the word level, the letter level, the phonemic level, the sentence level, and so on. The postulated decision mechanisms regarding what information to preserve, what information to ignore, and what information to modify, are admittedly hazy. In other words, how is this information coordinated and elaborated upon, to form a meaningful and useful representation?

It is in this regard where I see ST as proving to be of value. Rather than looking upon the issues as one of encoding information, let us argue instead that it is actually a process of creating signs. A sign, then, is different from an encoded set of information. The paragraph, as a whole, now can be treated as a unit, which has various semiotic properties. It has an interpretant, which probably serves as the basis of representation in LTM. An organization of signs in LTM would further be another qualitatively distinct sign. So, essentially, I am arguing for a model of semiotic processing. Such a model offers a real alternative to associationistic models.

It is also of interest to note that there are examples of CP research which also demand non-associationistic interpretations. These findings, when interpreted from a semiotic point of view, shed light on the claim that empirical research can help clarify ST. I will cite three well-known studies.

The first study is from Bartlett (1932). Bartlett was interested in how the meaning of a passage affects its subsequent recall. In his experiment, subjects read passages which were organized in unusual fashion, which stressed trivial details, and so forth. These subjects then attempted to recall the passages verbatim over increasingly long periods of time. Bartlett found two very interesting effects. First of all, on the initial recall, most of the subjects had reorganized the passages. Organization was more standard, irrelevant details were dropped, and so on. Next, he found that subsequent recalls were based upon this initial recall. ST would argue that the subjects had treated each passage as a single sign, and endeavored to represent that sign in the most economical, meaningful, and useful fashion.

The second study illustrates the tendency to organize bits of information into wholes, and furthermore the compelling nature of those represented wholes. Bransford and Franks (1971) created complex sentences such as: "The ants in the kitchen ate the sweet jelly on the table." From these complex sentences they created simple sentences. These simple sentences either incorporated one idea (The ants were in the kitchen), two ideas (The ants in the kitchen ate the jelly), or three ideas (The ants in the kitchen ate the jelly on the

table). Sets of these sentences were presented to subjects. Note that the original complex sentences were never presented. Subjects were then asked to recognize those sentences using a standard recognition paradigm, and furthermore to rate their confidence of recognition. Bransford and Franks found that subjects were most confident that they recognized the complex sentences (which they never actually saw), and made the most errors and were least confident regarding the one-idea sentences, some of which they did see. This study reinforces Bartlett's findings, and extends them into the area of recognition.

Finally, I will cite a study where the use of the information represented (or its pragmatic character) plays a key role in recall. Anderson and Pichert (1978) gave their subjects a description of a house. Then, the subjects were instructed to recall as many of the features of the house as they could, from a perspective of a potential home buyer. After this task was completed, subjects then shifted their perspective to that of a burglar, and attempted another recall. On the second recall, there were features recalled that had not been recalled on the first task.

All three of these studies share the common feature that the representation of information is both more flexible and more holistic than can be accounted for by an associationistic perspective. A semiotic perspective, though, with its focus upon signs, and their uses, can handle these data quite well.

As my last task, I would like to outline some possible research areas which might help in the formulation of a cognitive psychosemiotic theory. ST points out that people both process and create signs. Very little research in CP has dealt with information generation. If subjects do generate information, how can these (probably) widely varying bits of information be compared systematically? If the products are viewed as signs, however, then the semiotic characteristics of these differing products can indeed be compared. Next, there are a number of studies in CP which deal with pragmatic issues. Brewer (1975, 1977) has looked at this area carefully. ST can be used to shed more light on this topic. Finally, I think it should be very interesting to examine the necessary practical limits to the creation, interpretation, and use of signs, compared to theoretical and logical models

"ideal" sign systems. Of course, there are any number of other directions for potential research. These are just a few examples.

In conclusion, it is clear that a great deal of work needs to be done. I hope that I have established that this work should be done, to the eventual benefit of both disciplines.

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THE TELL-THE-TALE DETAIL

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Attempting a definition of the role of details in architecture, Philip Johnson (1964: 137) an architectural guru quotes a maxime which within the architectural community has always been ascribed to Mies Van der Rohe: "God lies in the detail". "Der liebe Gott steckt im Detail." The German version of the adage, perhaps the original source of Mies's maxime, was used by Aby Warburg, an art historian, to indicate the foundation of the iconographical method for re-searching in art history. "Le bon Dieu est dans le detail." The French version has been attributed to Gustave Flaubert and in this case was used as indication of a manner of literary production (Hecresche, 1974:101). The common denominator in these three different forms and uses of the maxime indicates that the process of signification is in the detail. This concept has triggered the following sequence of thoughts and observation on the role of the detail in the process of signification in architecture. The aim of this paper is to show that the role of detail is that of being the generator, a role traditionally ascribed to the plan (Le Corbusier, 1924), and that technology with its dual presence as techne of logos and logos of techne (Frascari, 1981) is the base for the understanding of the role of details. That is to say the 'construction' and the 'construing' of architecture are both in the detail. Elusive in a traditional 'dimensional' definition, the architectural detail can be defined as the union of construction, the result of the logos of techne, with construing, the result of the techne of logos.

Details are much more than subordinate elements but rather they can be regarded as the minimal units of

signification in the architectural production of meanings. In traditional architectural semiotic studies these units have been singled out in spatial cells or in element of composition, in the alternating of void and solid or in the relationship between inside and outside (M. Krampen: 1979). The suggestion that the detail is the minimal unit of production is more fruitful because of the double-faced role of technology which unifies the tangible and the intangible of architecture. Evidence of this is given in an aphorism by Jean Labatut, a French Beaux-Arts trained Princeton professor of architecture.

whatever the airspaces, areas and dimensions involved, it is the precise study and good execution of details which confirm architectural greatness. 'The detail tells the tale.' (Labatut: 1964:62)

These concepts, (1) architecture is a result of the resolution and substitution of details, and (2) the understanding and the design of details constitute basic features of architectural theory and practice and as concepts have always been latent images (Frascari, 1981). In the details are the possibilities of innovation and invention and it is through them that architects can give harmony to the most uncommon and difficult or disorderly built environment generated by a culture. That is to say that there is a truth in a classical platitude of architectural criticism: "That might have been great architecture if only someone had worked out the details...".

Dictionaries define 'detail' as a small part in relation to a larger whole, In architecture this definition is contradictory if not meaningless. A column is a detail as well as it is a larger whole, and a whole classical round temple is sometimes a detail. In architectural literature, columns and capitals are classified as details, as are piani nobili, porches and pergoles. The problem of scale in those classifications and the synedochial relationship between aediculas and aedifices (Frascari: 1980, 115) makes the dictionary definition useless in architecture. However it is possible to observe that any architectural element defined as detail is always a joint. Details can be 'material joints' such as in the case of the capitals which are the connection between columns shafts and architraves, or they can be 'formal joints' such as in the case of the

porch which is the connection between an interior and an exterior space.

The etymological origin of the word 'detail' does not help at all in the understanding of the architectural use of it. In its French commercial origin the term differentiates the selling of slices of pizzas from the sale of whole ones. This makes clear that details are parts, but does not help in the understanding of the details as joints, and their non-subordinate relationships with wholes. However, in architectural literature "detail" appeared in the French theoretical works of the 18th century and from France spread all over Europe. This was caused by the coupling of the term with the concept of style and by the active influence of French literary criticism and theory on the French neoclassical architects. Detail, indeed, belongs to eternal analogy set between literary criticism and architectural productions. In 1670, Despreaux Nicolas Boileau, warning against the inutile detail, explains the inherent problems of an overdetailed poem comparing it with an overdetailed palace (1966: 158).

In the Beaux Art teaching of architecture the understanding of the role of details as generators of the character of buildings determined a very peculiar graphic means for their study, the *analytique*. In this graphic representation of a designed or surveyed building the details play the predominant role. They are composed in different scales in the attempt of singling out the dialogue among the parts in the making of the text of the building. Sometimes the building as a whole is present in the drawing and generally it is represented using a minuscule scale and as detail among details. The *analitique* was the tool for the construing of details. From this point of view the whole is different from the sum of its parts, since it can be in itself with an appropriate change of scale a part, i.e., a detail.

Architecture is a system where there is a total architecture and a detailed architecture. The total architecture is a conventional product and it is the result of the accepted explanation of it, whereas the detailed architecture is the process based on the process of drawing extrasystematic details into the realm of the system and of expelling systematic details into the area of non-system...The detail the builders of a formed and stabilized system reject for being, from their point of view, superfluous and unnecessary,

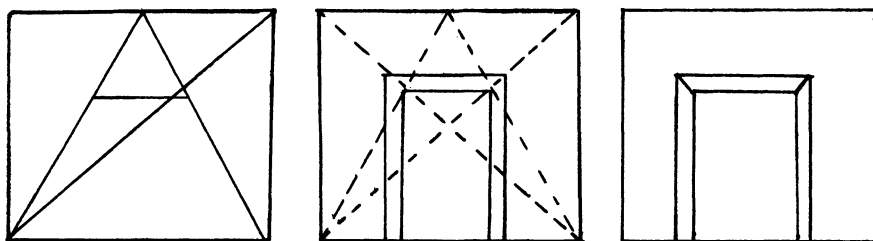
turns out to be the cornerstone of a subsequent system (Lotman 1977; 196).

A perfect instance of the relationship between total architecture and detailed architecture is the Greek doric temple. The total architecture of it was genetically defined by the 7th century B.C. and it was the result of the canonization of a timber technology into a stone technology. Vitruvius in his treatise indicates that there was no problem in the definition of the temple's total form, but indeed there were many problems in the solution of its detailed form. Vitruvius tells us how the Greek architects, besides building the doric temple, produced carefully verbal descriptions of their solution of the details. Furthermore, the Roman architect on the base of the unsolved detail of the cornerstone, generates an argument for the refusal of the doric temple as a sound architecture. The triglyph, the stone representation of the head of the cross-beam, and centered on the vertical central axis of the column, in the case of the corner becomes anomalous. If centered on the axis the corner is unfinished. If it is moved at the edge of it the careful canonical modulation of the parts is brutally changed. The paradigm is altered in the cornerstone. The human body, as expressed canonically in the Greek statuary, is the paradigm for every detail, from columns to the smallest moulding. The canon, a set of mathematical relationships, helps in forming a concept, a way of classifying details as way of giving them meaning. A "concept" in this case, "is something like a picture with which one compares objects" (Wittgenstein, RFM:v, 50). The human body, a memorable shape, is used as 'proof' for the mathematical proposition of the doric temple.

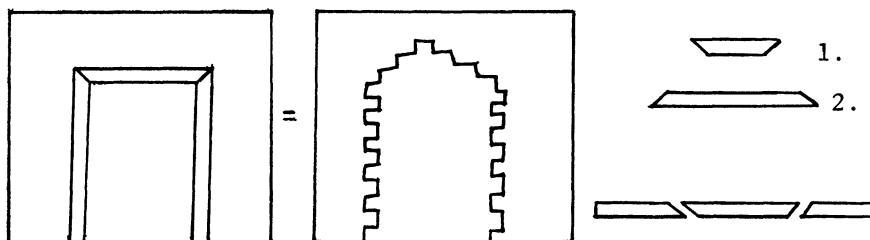
The mathematical construction and construing of architectural details is in no sense a technical question. The discussion of it will be free from both architectural and mathematical technicality and the matter should be regarded as falling within either the foundation of architecture or the foundation of mathematics and ultimately in the theories of signs.

The process of designing, ordering the materials, and building a house, are techniques in the same way mathematics is a technique by which the designer, the builder, and the user of a house transform the appropriate sign with a view to predicting the occurrence of certain events. Mathematical

techniques provide us with a structure for describing the built world, a conceptual framework into which the designer, the builder and the user can fit their empirical experience. Mathematics shows how to derive a sign from another sign by transformation. An architect's door is derived with the following mathematical technique applied to a system of signs.



A builder's door is derived from the above graphic sign system with the following technique:



In this guise mathematics does not state facts, but gives us the forms in which to state facts. It provides us a sign system for the construction and the construing of buildings, creating concepts.

Mathematical propositions embodied in the architectural details do not state facts, either about a realm of mathematical signs or about the physical world, but rather they furnish us with forms of inference. These propositions do not emphasize internal processes of thought, but indeed recognize the presence of the public, and the intersubjective expression of mathematical thought. The mathematical issues of the relationship of the parts in a joint are not the result of a formal process. Instead it is possible to recognize in the detail that it is ultimately the human use of symbols which is the foundation of mathematical inference. However, the detail is also the place where mathematical proposition do not simply derive from the mean-

ings of the architectural joint, but rather, the mathematical inference itself creates meanings, in other words, it forms 'concepts'. In doing mathematics as doing in architecture we are simply transforming one expression into another; and whether the transformation is correct is not determined by a correspondence to mathematical Platonic signs but simply by how architects, builders and users of the buildings use these expressions and what they call 'correct.' Mathematics in architecture is basically a process of transformation of signs rather than the discovery of mathematical facts. They provide us with a framework which allows the classifying of the visual signs and the understanding in a creative way of the functions of buildings. Mathematics provides a language for stating facts within a 'scale', a way of making comparison, and relate singly visually perceived architectural details. The notion of the individually perceived details can be illustrated with the phenomena of "indirect vision" as explained by Herman von Helmholtz:

The eye represents an optical instrument of a very large field of vision, but only a small very narrowly confined part of that field of vision produces clear images. The whole field corresponds to a drawing in which the most important part of the whole is carefully rendered but the surrounding is merely sketched, and sketched the more roughly the further it is removed from the main object. Thanks to the mobility of the eye, however, it is possible to examine carefully every point of the visual field in succession. Since in any case we are only able to devote our attention at any time to one object only, the one point clearly seen suffices to occupy it fully whenever we wish to turn to details (Torretti: 1978, 165).

In the phenomena of indirect vision the detail perceived is the signs of the presence of the architecture surrounding us. These signs, in themselves quite devoid of sense, become through analogies meaningful and they allow the understanding of the whole vision field (Torretti: 1978, 162-171).

Architecture as art of the appropriate is the theme of Leon Battista Alberti's architectural theory. Alberti sees architecture as the art of the selection of appropriate details whose result is beauty. He defines beauty as "the

concinnity of all the details in the unity to which they belong", in other words beauty is the skillful joining of parts by a mathematical normative by which nothing can be added, subtracted, or altered for the worst. (1485: 93 v. 12). Generally this principle has been interpreted as stating that a building should be a completed and finished whole, a total architecture. Alberti, however, does not apply this concept to the actual edifice, but rather to the mental one. The joint, that is the detail, is the place of the the meeting of the mental construing and the actual construction. A perfect instance of this union of mental function and physical representation is in the facade of Palazzo Rucellai designed by Alberti and built by Rossellino in Florence. Although the facade is incomplete, and its incompleteness is clearly shown, the detailed architecture is complete and nothing can be added or subtracted for the worst. The grooves of the joints of the slabs composing the thick stone veneer of the Florentine schacciato representing the post and beam structure of the three superimposed classical Orders related with arched windows and infilling walls are the solution of the mathematical set by the relationships existing among the parts of the facade. In many cases the joints are not real ones, and the shape of the stones is not regular as they appear. Fake grooves had been carved in the stone to make the detailed architecture complete and at the same time a mathematical proof.

The measuring in architecture during the processes of construction and construing is based on the interpenetration of two simple notions, 'just as many as' and 'just as long as'. These notions are generally expressed with two terms derived from the six categories generated by Vitruvius' infatuation with Greek architectural terminology, viz: eurhythmy and symmetry (1.i.). Eurhythmy, based on the repetition of the parts is the formal solution to the notion of 'just as many as', whereas symmetry, the conforming of the part to a module, is the formal answer to the notion of 'just as long as'. In the latter, the selection of the module is the technique which gives meaning to the whole building. The Greek module of half the diameter of the circular section at the base of the column was 'just as long as' the print left by the feet of a healthy and canonically proportioned young man. In this way, the joints in the body become the marks of a special ruler for explaining to the makers of the details the norms of their making. The numbers of the parts seen as the figures of reference for the notion

'as many as' give meaning to the set of signs ruled by eurhythmy. The fixing of a module is the establishing of a system of numerals. The relationships among the details creates a language game which becomes an institutional activity of assessing numbers and determining 'how many.' Mathematical propositions such as eurhythmy and symmetry, rather than being themselves descriptive of anything, enter into the singling out of criteria for the application of concepts in terms which can be then described. In the architectural activity of measuring, modules, proportion and the related rules of conversion based on geometrical and mathematical figures are activities aimed at determining the application of certain concepts in contingent practical contexts. Measuring, proportioning, and placing, in other words, Alberti's triad of Number, Finishing and Collocation are the games played in the making of architecture as a result of the language games played during the process of piecing together the various materials.

A poetic comment of Louis Kahn is the beginning point of the discussion of the concept of detail as in the architecture of Carlo Scarpa (1906-1979), a Venetian architect. The art of detail in his architectural production is of the most sophisticated and learned form.

In the work of Carlo Scarpa
 Beauty
 the first sense
 Art
 the first word
 then Wonder
 then the inner realization of Form
 the sense of wholeness of inseparable elements.

Design consults Nature
 to give presence to the elements

A work of art makes manifest
 the wholeness of Form of the
 symphony of the selected shapes
 of the elements

In the elements
 the joint inspires ornament, its
 celebration.
 The detail is the adoration of
 Nature (Scarpa, 1974:1).

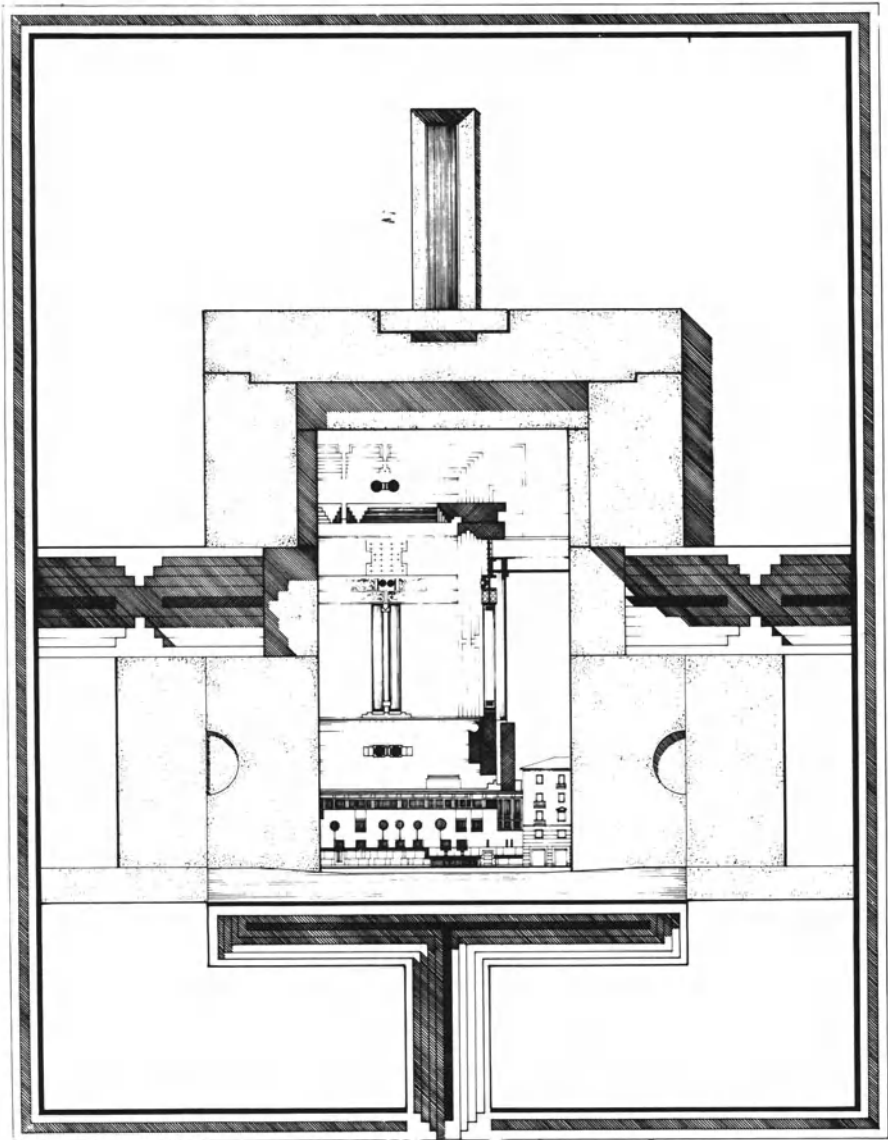


Figure 1. Analytique, Carlo Scarpa, Bauca Mutua Popolare di Verona.

The adoration of the joint is in Scarpa's architecture a perfect realization of Alberti's concinnitas. The selection of the appropriate detail is the result of the singling out of its polyfunctionality. Each joint tells us the story of its making and of its placing.

Scarpa's architecture from a generic classification viewpoint of architectural history can be defined as the merging of the principles of the organic architecture as expressed in Frank L. Wright's design with a learned distilling of the Venetian craftsmanship with a blend of modern and ancient technologies.

The analysis of Scarpa's detail can be managed satisfactorily only visually, through a continuous comparison between drawings and built objects and the historical and practical reference generated by any single detail. It is also necessary to see Scarpa's details from two different sides. On one side his details are the result of the interfacing of design and craftsmanship on the building site with the constant sensorial verification of them. An instance of this is Scarpa's practice of visiting the building site during the night to verify visually with a flashlight and the resulting casting of strong shadows the execution and the expression of the details. In the normal daylight it is indeed impossible to focus on details in such selective manner. This visual process is an expression of the phenomena of Helmholtz's indirect vision.

On the other side Scarpa's details are the result of an intellectual game performed on the 'working drawings' which is the result of the interfacing of design and draftmanship. That is the matching of the construction of a representation with a construction of an edifice. It is generally thought that the relationship between architectural drawings and buildings is a visual relationship because of the concept of matching that is a visual projectivity. However, Scarpa's drawings show the real nature of architectural drawings which is that they are representations which are results of constructions. That is a construing of perceptual judgements interfaced with the real process of physical construction of an architectural object. The lines, the marks on the paper, are set of the transformation from one system of signs to another. They are transformations of appropriate signs with a view to the predicting of certain architectural events, that is: on one hand the phenomena of construction and the

transformation of the builders, and on the other hand the phenomena of construing and the transformation of the possible users. In this guise on the same drawing there are present several layers of thought. The technique by which the design is developed is the same by which the drawing is made. The continuous inference process on which the design process is based is transformed in a sequence of marks on paper which are the analog for the process of construction and construing. The piece of expensive cardboards selected for supporting the slow process of construction of a design are used to present concurrently vertical and horizontal sections and elevations of the architectural piece and a sequence of unframed vignettes analyze tridimensionally any joint of the object. They are projections of the character of each detail in generating the whole text and of their role in the phenomena and the 'indirect vision'. Scarpa's drawings, as a result of inference among signs, do not define future architectural pieces as simple sum of lines, surfaces and volumes, matched by the use of scale with the building but rather present the process of transformation of the details from one system of convention to another system. In other words, if these drawings are concretized, through a graphic system, the changes that occurred in the sequence of sign indicate the transformations from the timber structure of the Doric temple to its representation in a stone structure or, as in the case of Scarpa's design, from a wood door to one of stone.

To conclude this discussion on the role of detail as the minimal unit in the process of signification it is useful to restate that architecture is an art besides being a profession. This is because of the understanding generated by this study of the detail as a joint. Architecture is an art since it is concerned with not only the original need of shelter, but in putting together in a meaningful manner spaces and materials. This is achieved through the making of formal and actual joints. To complete the understanding of this essential role of the joint, and its place in the process of signification, it is useful to recall that the meaning of the original Indo-European root of the word 'art' is joint. And as Kahn has said:

The joint is the beginning of ornament
And that must be distinguished from decoration
which is simply applied.
Ornament is the adoration of the joint (1975: 43).

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THE SEMIOTIC CRISIS IN CONTEMPORARY HOSPITALS

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The paper which I am about to present has developed from my work during the past year with the Quality of Working Life Unit at McGill University. "Quality of Working Life" (QWL) is an approach to organizational redesign developed at the Tavistock Institute in London by Eric Trist and others during the 1940's. Its three most basic assumptions are, firstly, that all organizations -- be they industrial, educational, governmental, etc. -- are open systems sensitive to their changing environments; secondly, that all organizations have two main types of 'components', technical and social, both of which must be jointly optimized if the organization is to survive in its environment; and, thirdly, that traditional bureaucratic organizational structures are no longer effective for dealing with our turbulent and rapidly changing social environments.

My own particular task has been to develop the application of QWL, "socio-technical" principles (hitherto applied mainly to business or industrial organizations), to organizations belonging to the health care sector, mainly, hospitals. In carrying out this task, I have therefore had numerous occasions in which to observe and analyze the social and technological aspects of many Canadian hospitals, as well as to investigate the changing environmental factors which have affected them so profoundly.

The purpose of the present paper is to show how certain historical factors have wrought radical changes upon the traditional semiotic systems of hospitals, such that hospitals, as social institutions (which institutions, by definition

should generate and foster shareable symbolic systems), are becoming less and less intelligible not only to the communities they serve, but to the professional and non-professional employees who work in them. This paper, then, concerns itself with hospital semiotics.

The term "hospital semiotics" may be understood in two senses: firstly, in terms of the numerous and predominantly medical sign systems typically at play (or better still, at work), within these institutions: linguistic codes, graphic codes, technological notational conventions, dress codes, rituals, protocols, and so on; and, secondly, in terms of the current search for a set of reliable and valid indicators by means of which it may be judged when hospitals are accomplishing (or are failing to accomplish), their objectives, amongst which are usually listed, (depending upon the type of hospital): (1) diagnosis, (2) therapy, (3) rehabilitation, (4) prevention, (5) education, (6) research, and (usually assumed) (7) custodial care. Thus hospital semiotics may be said to be an 'intersect' of medical semiotics, on the one hand, and what we might call organizational or institutional semiotics, on the other. This paper will deal with hospital semiotics in the first sense.

Amongst the aforementioned historical factors which have produced the current semiotic crisis in hospitals are the following:

1. The development of sophisticated bio-medical, chemical and data processing technologies.
2. The intensification of government intervention in health care.
3. Rising job expectations on the part of unionized employees.
4. The advances of the feminist movement.
5. The development of hospital populations which are highly differentiated professionally, ethnically, and socio-economically.

In the following pages I shall attempt to show how these factors have each impacted upon traditional hospital semiotic systems.

1. The development of sophisticated bio-medical, chemical and data processing technologies has profoundly affected traditional patterns of doctor-patient and nurse-patient interactions, and has, in addition, generated a whole array of new

para-professional roles through which these technologies are administered. In his book Medicine and the Reign of Technology, Reiser cites the invention of the stethoscope as the first in a long series of technological events which have increased the human distance between the doctor and the patient. Moreover, modern technological equipment clearly has its own accelerated rhythms and peculiar esthetics to which both doctors and patients feel obliged to conform.

Not discounting the influence upon public attitudes of the counter-establishment, 'wholistic' medical movement of the 1960's, most North Americans continue to be committed to what has come to be called "the technological imperative." Indeed, doctors and other medical workers often display a kind of 'techno-macho', staunchly defending the position that advanced technological medicine is the approach of choice. And few are the brave amongst us who, when faced with a truly threatening illness, opt for the alternative approaches offered by the medical counter-establishment. That there exists a strong taboo against doing so may be inferred from the intensity of the media coverage that is given to those individuals who have opted for that choice.

Technology also determines the location of the doctor-patient encounter. Doctors' offices cannot readily house C-T scanners and other such heavy hardware. Thus the hospital increasingly becomes the theatre within which medical encounters come to be acted out.

Technology has also generated and continues to generate numerous medical specialties which in many cases come to be institutionalized as departments in medical schools and in hospitals (Radiology being an earlier example, and Nuclear Medicine being a more recent example.) A recently compiled list of current medical specialties appears below:

Allergy	Endocrinology
Anaesthesia	Epidemiology
Cardiology	Family Medicine
Cardio-Vascular & Thoracic Surgery	Gastro-enterology
Clinical Pathology	General Surgery
Dentistry	Gerontology
Dermatology	Gynecology
Diagnostic Radiology	Hematology
Electroencephalography	Infectious Diseases
Emergency Medicine	Immunology

Internal Medicine
 Medical Biochemistry
 Microbiology
 Microsurgery
 Neonatology
 Nephrology
 Neurology
 Neuro-psychiatry
 Neuro-surgery
 Nuclear Medicine
 Obstetrics
 Oncology
 Ophthalmology
 Orthopedic Surgery

Oto-Rhino-Laryngology
 Pathology
 Pediatrics
 Pharmacology
 Physiatry
 Plastic Surgery
 Psychiatry
 Public Health
 Radiotherapy
 Respiratory Diseases
 Rheumatology
 Thoracic Surgery
 Urology

2. Government intervention in health care in Canada has made hospital and medical care a right of all citizens rather than merely a privilege of some. Patients each have a Medicare card which guarantees almost unlimited access to as many doctors as they wish to see, constrained only by the doctors' schedules. Some patients have been accused of abusing the system by overexercising their prerogative to see doctors--making numerous and often unnecessary visits. Some doctors, in turn, have been accused of abusing the system in another way, namely, by cutting down on time spent with each patient, or by ordering unnecessary tests, or by insisting upon additional, unnecessary visits--all presumably, for monetary gain. Trying to establish what are reasonable expectations on the part of both parties is a slippery business indeed. There clearly seems to be, in many cases, conflicting values at play. For example, patients simultaneously admire and decry the detached perspective of many physicians. Also, many middle and upper-middle class patients, although committed in principle to the egalitarian impulse underlying the implementation of Medicare, nevertheless found themselves feeling more than a little annoyed when their doctors no longer spent as much time with them as they had done in the past. These and many other economic and social factors have altered in subtle and profound ways the basic assumptions and mutual expectations concerning doctor-patient interactions.

3. New demands and changing expectations on the part of unionized workers have created numerous problems for hospital organizations. Firstly, the effect upon the hospital of strikes, not only by service personnel (e.g., kitchen workers,

boiler room attendants, etc.) but by the nursing and interne staffs is always likely to be more or less disruptive. Secondly, because job descriptions determined by union laws are so finely interpreted, many unionized workers lose their role flexibility, and become frozen into their routine tasks in a way that not only precludes the possibility of co-operation with other workers, but also stifles the individual's creativity in problem-solving. Finally, since many hospital workers can only rise in the system by means of seniority (and then, only so far), many of the more intelligent and talented workers, not unreasonably, use the unions as a forum in which to develop their leadership abilities, their power, and their prestige. Hospital goals and objectives may often get bypassed in the process.

4. The advances of the feminist movement have had a profound effect upon traditional semiotic systems of hospitals. Firstly, simply in terms of numbers, it has been well-documented that nursing enrollment has declined in recent years. The shift from a 'service' value (to help humanity), to a more 'self-service' value (to develop and enrich oneself) has steered many young girls away from this traditionally female role. Also, of course, many other kinds of careers are now opening up for young women, undercutting the career-choice 'triad' of earlier times: teacher, nurse or secretary. Furthermore, current rhetoric forbids that any female 'play handmaiden' to any male, and many doctors today find their orders being seriously challenged by university-educated nurses who believe that they, too, should have a stake in decision-making pertaining to patient care. This new posture of nurses is often expressed by their refusal to conform to earlier dress codes; white uniforms, shoes, stockings, and starched cap (plus the requisite nurses' pin and name tag) are now often ignored for other kinds of dress. While this may make the nurses feel that they have extricated themselves from the traditional, hierarchial 'caste' system, the patient is often confused as to the role identities of the numerous people who enter his or her hospital room.

These male-female, doctor-nurse issues are becoming somewhat less acute as more and more females enter medical school and more and more males enter nursing. Nevertheless, the kinds of role behaviours that characterized hospitals in the past have undergone dramatic change. Individuals can no longer count upon predictable responses on the basis of the role that a person is fulfilling.

5. Finally, the development of highly differentiated hospital populations has created enormous problems of integration for hospital administrators, and enormous confusion for the patients and the staff. This has already been dealt with with respect to the increase in medical specialties, and in terms of the proliferation of para-medical roles, both of which are related to the development of medical technology. Since sharp differentiation of roles and tasks creates differentiation of outlook and perception, a frequent effect within organizations, including hospital organizations, is that many conflicts and communicational problems begin to emerge. Also, and this is particularly the case in hospitals, each differentiated role tends to foster its own peculiar language and terminology, inviting numerous 'translation' errors and misunderstandings. Superimposed upon this situation is a set of circumstances that complicates things even further, namely, the numerous differences amongst hospital staff and patients (especially in large, urban areas), with respect to nationality, ethnicity, and religion. Each national, ethnic, and religious group tends to defend its own set of values pertaining to modes of expressing and responding to and interpreting illness. The task of trying to match staff values to patient values is the stuff of hospital administrators' nightmares, and bio-ethical decision-making must take both sets of values into account. Examples of these kinds of conflicting values are the Catholic nurse who refuses to assist at abortions, and the patient who is a Jehovah's Witness and who refuses, on that account, to receive a blood transfusion.

In the preceding pages I have tried to document some of the dramatic changes which have occurred in the traditional semiotic systems of hospitals, changes which are responses to the powerful environmental forces which have impacted on hospitals over the past several decades, changes that have shaken to their roots the traditional bureaucratic structures of hospitals which worked (and even worked well), in an earlier and more stable period. A final, unanswered question remains: "What viable semiotic patterns will finally appear when (and if) the kaleidoscope settles?"

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VIII. PSYCHOLOGY, SOCIOLOGY, AND SEMIOTICS

WHO APES ENGLISH?

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Recently, the conjecture that man is the only primate capable of using a language containing sentential structures apparently has received strong evidential support.¹ In general, the evidence suggests that there are significant differences between the respective utterance corpora of humans and chimpanzees who have been taught American Sign Language (ASL), differences which involve the incidence of repetition in adjacent utterances and the mean length of utterances.²

In these remarks I would like to review the strongest arguments along these lines, and urge that, in each case, although apparent differences between the linguistic performances of man and ape may exist, the differences cannot be considered distinctive because they are artifacts of unresolved philosophical differences between the disputants or are explicable solely in terms of non-linguistically specific central nervous system capacities.

At the outset, it is convenient to broadly divide the issues in the ape-language controversy into two categories. The first of these I will call "philosophical", and the second, "pragmatic". "Philosophical" issues (on the present appropriation of the term at least) are such because they are irresolvable by the outcome of any experiment; they must be decided, if at all, independently of positive evidence. In contrast, "pragmatic" issues are those which can be resolved by friendly disputants through well-designed experiments. Failure of the disputants to clearly identify and separate the philosophical and pragmatic components of the ape-language

controversy has occasionally driven the dispute, I believe, along unproductive paths.

Let me first try to be a little more explicit about this, therefore, by isolating what seems to be at least one of the more recalcitrant philosophical issues in the controversy. Generally speaking, those who claim that apes do not acquire or use some interesting fragment of a natural language in the way that humans do have said so because they believe that there could be non-linguistic explanations of the putatively linguistic behavior these animals can exhibit with special training. Professor Terrace has urged, for example, that "unless alternative explanations of an ape's combination of signs are eliminated . . ., there is no reason to regard an ape's multi-sign utterance . . ." as a sentence.³

I do not want to try to categorically refute such a suggestion; in fact, I think it contains an element of truth. Rather, I would like to point out just how insidiously one can take refuge in it. Essential to it is the view that we should seek non-linguistic explanations of the apes' use of language. Just to have a brief way to refer to this desideratum, let me call it the NOLED (non-linguistic explanation desideratum).

On the surface, NOLED appears unobjectionable. Indeed, it hosts an absolutely plausible suggestion -- that some linguistic chimpanzee or gorilla behavior should be explained on grounds that do not invoke anything peculiar to the way humans use language. Professor Terrace and the Gardners have observed that at least some chimpanzee signing behavior is likely to be a mechanical, mindless imitation of the trainer's gestures, for example.⁴

But does this mean that, in practice, NOLED is always harmless? To answer that question, we really must pry a bit deeper and look at a more specific formulation of it and at the role that formulation plays in the dispute. Professor Terrace's version will serve well here. According to him, unless we can eliminate⁵ non-linguistic explanations of an ape's signing behavior, there is no reason to believe that such behavior can properly be considered interestingly akin to human linguistic behavior.

At the heart of this version of NOLED is an argument by elimination. Let's call this version of NOLED, accordingly,

NOLEVER (non-linguistic explanantion desideratum, elimination version). In order to "establish", "confirm", and so on, a linguistic explanation of an ape's use of language, that story goes, we must be able to "eliminate" all nonlinguistic explanations of such use.

Now there are many difficulties with elimination-style arguments in science; few are new with me. Let me try to sketch what seems to be the most forceful of them.

It can be rigorously shown that any deductive explanation of a phenomenon can be saved if we make suitable adjustments elsewhere in our system of beliefs.⁶ And, presumably, linguistic explanations aim at being, or becoming, deductive explanations. Arguments by elimination presuppose that we can categorically exclude all but one type of an exhaustive list of types of explanations of signing behavior in chimps, for example. But by the above, it is never possible to obtain such exclusion -- unless, of course, the disputants agree by convention to allow such exclusion in advance. That agreement is obviously not forthcoming.

To put the point another way, suppose we do find some apparent difference between language use in children and apes. Can such results definitively show that there is some distinctive difference in language use or acquisition between chimps and children? Clearly not. For in light of the above argument, it is possible that a difference in the linguistic competences of children and apes can be explained by, say, non-linguistic learning strategies which humans deploy with more sophistication than apes.⁷ And this dodge is always there for someone bent on saving the view. Thus NOLEVER is just gratuitous.

Philosophical skirmishes notwithstanding, there are serious experimental issues in the ape-language controversy. In the remainder of these remarks, then, I would like to examine a rather forceful body of positive -- "pragmatic" in the above sense -- evidence which has been taken by some to suggest that there are significant differences in the way in which apes and humans use language. Professor Terrace's recent work in this vein is in my opinion some of the more comprehensive, and I will accordingly not hesitate to use it as a basis for my comments.

In outline, the argument forwarded by Professor Terrace

runs like this. The "most distinctive"⁸ feature of the human use of language is the rule-governed concatenation of words into sentences. Thus, only if an ape's putatively linguistic performances could be shown to exhibit interesting features of human sentence structure, would we have good reason to believe that apes use human language in the way humans do. A substantial body of evidence on the performance of apes trained in ASL, however, suggests that they use language in a way peculiar to them.

On the surface, this kind of argument is entirely plausible. It is highly questionable, however, whether the evidence actually forwarded sustains the view that there are significant differences between the linguistic efforts of chimps and children. Allow me to look at this evidence in some detail.

One of the two most forceful types of positive evidence brought to bear on the controversy involves the average or mean number of words per utterance (MLU) of chimps and children, respectively. Figure 1, for example, shows the MLU's exhibited by several children and by Neam Chimpsky (Nim), a chimpanzee trained in ASL, as a function of time.⁹ This figure strongly suggests two important differences between Nim's MLU and those of children. First the slope of Nim's MLU curve is generally "much" smaller than the slope of the children's curve(s). Secondly, the absolute value of Nim's MLU at a given age is generally "much" smaller than that of children. It is hardly so clear, however, that these apparent differences are significant.

Why? The slope of an MLU curve, by definition, represents the rate at which the MLU of a subject is changing. If we plot MLU for humans between age 0 and 70, the shape of the curve is roughly that of an "S". At first, that is to say, there is a relatively small MLU growth rate, followed by an interval during which growth rate is relatively high and constant, followed by an interval, roughly to death, during which the MLU curve is essentially flat, with an MLU somewhere between 5 and 20 words per utterance (see Figure 1).

Now Professor Terrace and his colleagues argue that because Nim's MLU curve is essentially flat during the period they report, there is good reason to believe that apes do not use ASL as humans do.¹⁰ But, as argued, flatness of an MLU curve is no distinction at all because the MLU curve of

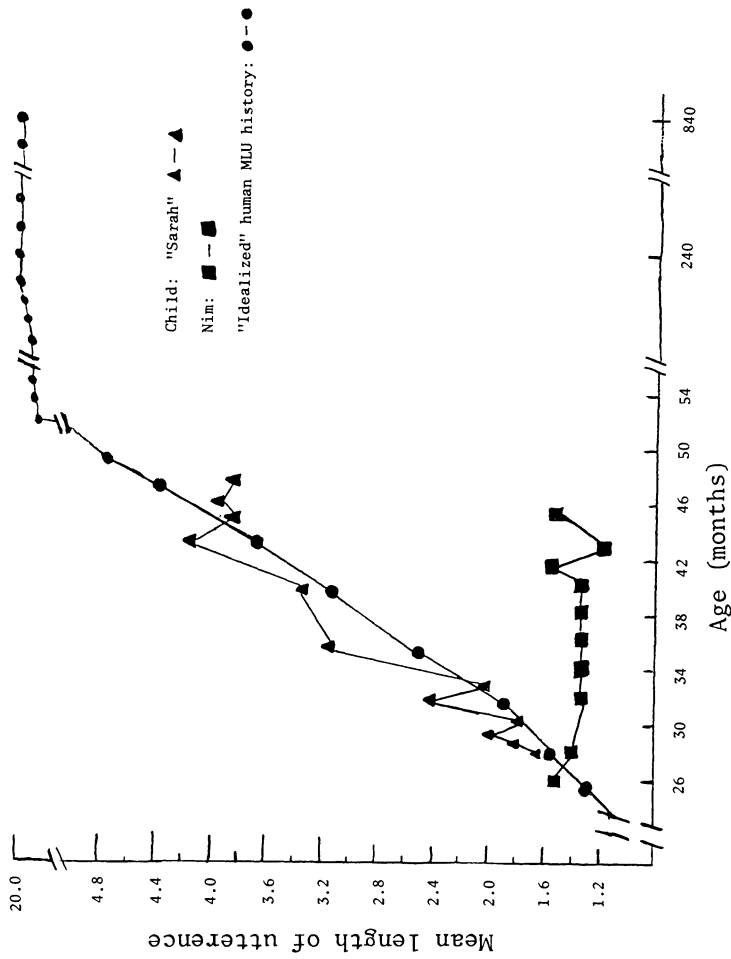


Figure 1. MLU vs. age for child and chimpanzee. (Adapted from H. S. Terrace, et al., Can an ape create a sentence? Science 206 (Nov. 23, 1979, p.895).

humans becomes flat in time, too. The flatness of the curve in Figure 1 is of little significance, therefore, until it can be established that commensurable intervals of human and chimpanzee MLU histories are being compared. It would be most helpful, in this context, to have Nim's MLU history before age 26 months, rather than his history only after 26 months.

Even without that data, however, we can make a telling comparison. In the month that Nim learned his first sign, his MLU growth rate was 1.0 signs per utterance per month. In contrast, the MLU growth rate of the human data reported in Figure 1 is only about 0.2 signs/utterance/month. Thus, the MLU evidence is at the moment too problematic to sustain the view that apes use language in a way different from the way humans do.

The second general line of "positive" evidence which has been invoked to show that an ape's use of ASL is different from that of humans concerns the nature of those utterances which Nim signed temporally close to those of his interlocutor. Utterances which follow those of an interlocutor without a "definite" pause are called adjacent utterances. Adjacent utterances can be naturally classified into four types. (1) Imitations are those adjacent utterances which contain exactly the lexical items of the interlocutor's utterances. (2) Reductions are adjacent utterances which contain some but not all of the items of the interlocutor's utterance and nothing else. (3) Expansions are those that contain some of the lexical items of the interlocutor's utterance along with some new items. (4) Novel utterances are those adjacent utterances which contain none of the items in the interlocutor's utterance.¹¹

Figure 2, taken directly from Professor Terrace's data,¹² compares adjacent utterance information on children and Nim. On the surface, the Figure suggests that Nim's expansions and reductions remained much higher than those of children; the novelty of children's utterances, one might infer from this Figure, increased with time while Nim's did not.

Or so it would seem. In reality, the picture is not nearly so clear. Since by definition, the proportion (A) of adjacent utterances in a discourse corpus is the sum of the proportion (I + R) of imitations (I) and reductions (R), the proportion (E) of expansions, and the proportion (N) of novel

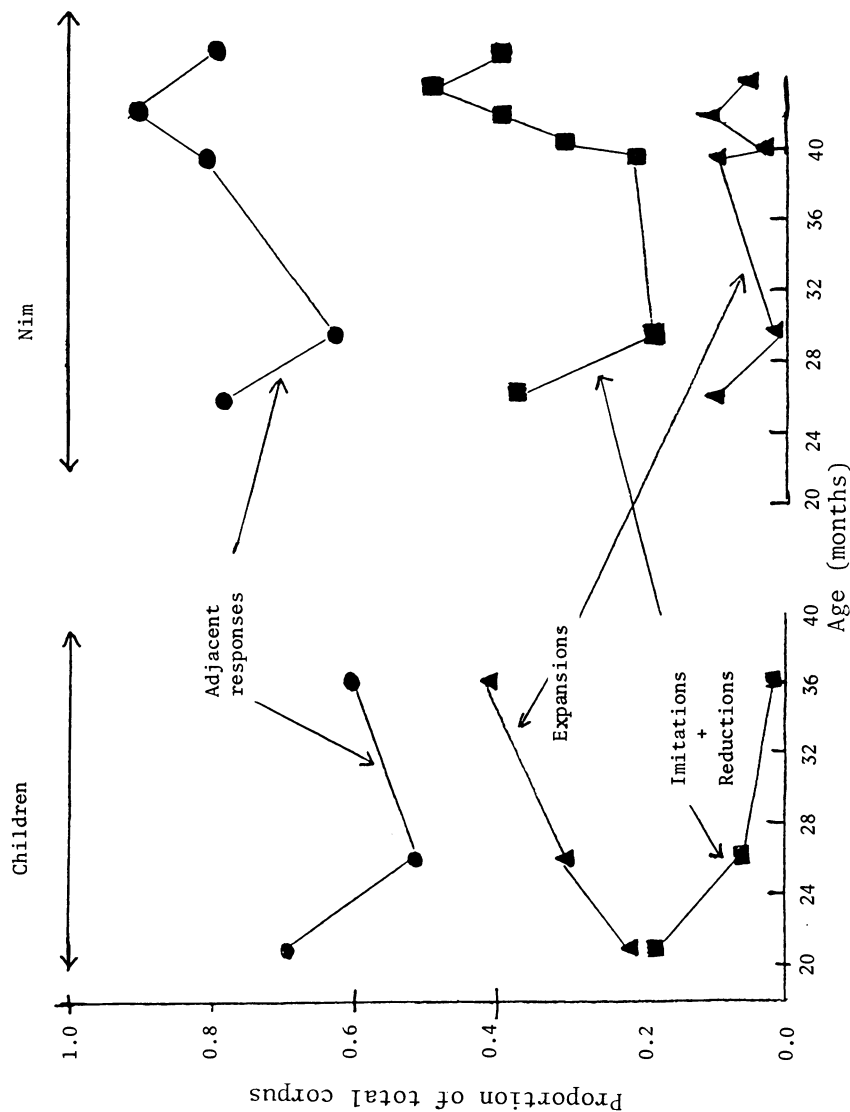


Figure 2. Adjacent utterances for children and Nim. (Adapted from H. S. Terrace, et al., Can an ape create a sentence? *Science* 206 (Nov. 23, 1979, p.896).

utterances, we have

$$A = I + R + E + N \quad (a)$$

or, solving (a) for N, we obtain,

$$N = A - (I + R + E). \quad (b)$$

When N is computed from Figure 2 and (b) above, the values in Figure 3 result. This strongly suggests a growth of novel utterances in Nim's discourse corpus; in fact, the absolute values of N at a given chronological age are higher than the children's at the same age. On this reading, the adjacent utterance evidence says that Nim acquires or uses new signs with greater frequency than children of the same age!

To date, the MLU and adjacent utterances data are the most forceful and systematic positive evidence in favor of the view that apes use language differently from man. One may fairly conclude that they do not make the case claimed for them.

At the risk of confessing to having dogmatically ignored the obvious, let me now consider a serious objection to this line of reasoning. It must be conceded that there are absolute differences in the MLU's of apes and children. There may even be other measures of linguistic competence by which children and apes differ. Hence, no matter how cleverly certain features of the experimental arguments for the view that chimps and children do not sign alike can be dodged, there nevertheless is some difference between the signings of chimps and children. Terrace's view, it would seem, is thus sustained.

There is a shallower and a deeper way to respond to this objection; but one, I think, paves the way for the other. First, the hipshot. I wonder whether a difference in MLU's or novel utterances is an interesting difference, anyway; one almost expects a chimpanzee to be worse at ASL than a child. After all, by human standards chimps are rather dimwitted creatures. Why shouldn't they have more meager linguistic competences?

Such a response, of course, is altogether too facile to be respectable on its own merits, and it is facile precisely because it is not quantitative. It doesn't suggest, in

<u>Age(months)</u>	<u>N (children)</u>	<u>N (Nim)</u>
21	0.29	N.D.
26	0.14	0.31
29 ⁺	0.21	0.33
36	0.17	0.37

Figure 3. Proportion of novel utterances (N) in the discourse corpus of children and Nim (Adapted from H.S. Terrace et al., "Can an ape create a sentence?" Science 206, November 23, 1979, p. 896.)

particular, how much of a difference one ought to expect between human and chimpanzee linguistic competences.

What we need, then, is a plausible initial conjecture about how much the respective competences should differ. In some ways, this is not as formidable as it might seem. We cannot, of course, hope at the present time for a particularly accurate estimate of the linguistic capacities of man and ape; at the least, too much of the relevant neurophysiology of language remains to be developed. But we can get an upper bound for the total amount of information the speech-and/or sign-processing centers (SPC) of the brain could handle in a unit time. The derivation of this bound, although not difficult, is somewhat lengthy, and hence will be deferred to a separate essay.¹³ Suffice it to say that on extremely mild assumptions, it can be shown that a respectable upper bound on the amount of information which the SPC of a child at age 50 months could handle is about 5 times the corresponding upper bound for an adult chimpanzee.

It should be no surprise that this bound is somewhat sensitive to SPC mass, "degree of neural integration", and language. Of course, only some fraction, say, F , of that upper bound is typically exercised by ordinary humans in producing ordinary English utterances. But it can be shown that even if chimpanzees were to exercise as much as F of their corresponding bounds, and hence, to use language as humans do, we should expect them to be able to produce English utterances whose SPC correlates would have an "informational complexity" which was only one-fifth the complexity of the corresponding SPC correlates of children of age 50 months.

It is especially interesting to look at the data in Figure 1 and Figure 2 again in light of this value. If we "normalize" the MLU data for children reported in Figure 1 by multiplying that data by one-fifth, we obtain MLU's precisely in the range of Nim's. Similarly, if we multiply the proportion of imitations and reductions in the adjacent discourse data reported for Nim by one-fifth, we find the result is about the same as that reported for children.

Whether the similarity of data for chimps and children "normalized" in this fashion is more than an artifact, only further research can establish. But we should not be too shocked, I think, if we should discover that, save for the

mere chance that Fate saw fit to fill our crania with more matter than theirs, apes and men would have pressed on in this world as peers.

NOTES

1. Terrace, H.S., et al., 1979, Can an ape create a sentence? Science 206:891. T.A. Sebeok and D.J. Umiker-Sebeok, 1980, "Speaking of Apes: A Critical Anthology of Two-Way Communication With Man," Plenum, New York.
2. Terrace, op. cit.
3. Ibid., pp. 900-901.
4. Terrace, op. cit.
5. Ibid.
6. This is just the "Duhem-Quine" thesis.
7. This tack is taken by Hilary Putnam, for example.
8. Terrace, op. cit., p. 891.
9. Ibid., p. 895.
10. Ibid., pp. 896-897.
11. Ibid., pp. 896.
12. Ibid.
13. Submitted as "A species-specific normalization of linguistic competence in man and ape," to The Ninth Conference on Computational Linguistics, Prague, Czechoslovakia, July 1982.

CULTURE AND MIND IN PEIRCEAN SEMIOTICS: ONE ASPECT

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An important feature marking Peirce's thought is its continual war against psychologism. This term may in his case be defined as the practice of positing vague, irreducible categories of mind to answer questions that in fact require precise categories of logic. In philosophy proper we can see Peirce's anti-psychologism in his backing of realism against nominalism and in his opposition to Cartesian rationalism. With respect to his semiotics the most important instance is his idea of the interpretant, which is not conceived primarily within a psychological context, i.e. the individual mind interpreting a sign, but rather a context of external relation between one sign and another. The relation is one of mutual conversion: one sign acts as the interpretant of another sign and vice-versa.

Umberto Eco sees in Peirce's idea of the interpretant a key to what he calls a "logic of culture" (T. p.3)¹ based on the semiotic notion that in a given community signs continually interpret one another to form a vast network of metonymic relation, one whose complexity is to be measured not just by the density of its organization but by the fact that it is continually reassembling itself into a new set of relations. Eco's theory, however, is not really based on Peirce's precise notion of the interpretant; it derives rather from an adapted version which requires that one preclude entirely from psychological categories. It should be noted that Eco clearly realizes that Peirce himself never takes anti-psychologism as far as he does, admitting with something like impatience that the American philosopher believes that "even ideas are signs" and that "in various

passages interpretants appear also as mental events" (R, p. 198). Peirce's acknowledgement of the psychological level Eco seems to pass off as a muddled moment in the life of an otherwise important thinker, claiming that for the notion of the interpretant to be a genuinely fruitful one we must in his words "free it from any psychological misunderstanding" and "perform a sort of surgical operation and retain only a precise aspect of this category" (R, p. 198). For Eco meaning is to be conceived as a "cultural unit" (T, p. 66), not a psychological unit. "No cultural unit," he argues, has to be explained by some platonic, psychic, or objectal entity" (T, p. 198). All of this he aphorizes into a slogan: "semiosis explains itself by itself" (R, p. 198). Which in context is really a muted way of claiming that culture explains itself by itself.

Eco's extreme form of anti-psychologism may seem theoretically attractive because it has a certain elegant and simple quality, but I think such attractiveness is specious. Peirce's more moderate form, which can account for a psychological semiosis as well as a cultural one, may seem less tidy and more complicating, but I will argue at the end of this paper that it still allows for a stronger, more general level of description -- which is precisely what Eco's theory is lacking. I want to make clear, however, that my quarrel with one aspect of Eco's semiotics should not be taken as an attack on his general theory, which strikes me as the most exciting application of Peirce's ideas to date and which explicates an area that Peirce himself saw only vaguely and indirectly, namely, the cultural context, a field that reveals, as Eco convincingly shows, crucial implications unfolding from the notion of the interpretant.

But why is Eco anxious to dissociate the cultural context of semiotics from psychological categories? There seem to be three important reasons. He is intent, first of all, on establishing semiotics as an academic discipline with its own clearly determined method and a precisely defined object of inquiry. As he makes clear at the beginning of his Theory of Semiotics (1976), what we call semiotics today is not yet a discipline but merely a field of studies, a disorderly repertoire of loosely related interests. But rather than devising a model general enough to unite these interests, he prefers an exclusionary strategy instead, one that establishes a kind of precinct defined by a series of boundaries or thresholds and that as a consequence enables us to

distinguish a true semiotic investigation from a false one. For Eco such a precinct would still be comprehensive enough, since it would include everything that can be taken as a sign. Such "taking" presupposes an ability to lie or conversely to tell the truth, an ability that would be impossible without a shared cultural code. For Eco, then, the object of semiotics is always a collective, trans-psychic reality. But if we actually follow his criteria, we end up with some pretty amazing results. For instance, an utterance encoding a dream into some language like English would be an object of semiotic inquiry, but the dream itself would not be. Similarly, animal communication could be considered semiotic only to the degree that such activity may be deemed cultural.

The second reason motivating Eco's anti-psychologism is close to the first: defining the object of semiotics as the logic of culture frees his theory from subjectivist elements. If a sign is seen as only a cultural unit, then it will always be in his words "physically testable" (R, p. 197). The difference between a dream and the narration of this dream into English is that the latter is a public and physical reality. And from this same point of view what interprets this narration is not the mental processes of some psychoanalyst for instance, but the words he uses, words that can be shown to follow definite codes and conventions (those of say English, Freudian theory, and so forth). "The idea of the interpretant," claims Eco, "makes a theory of signification a rigorous science of cultural phenomena . . ." (T, p. 70). There is no room here for impressionistic speculations about what occurs in the mind of addresser or addressee. Since signs are defined only as cultural units they lie entirely within our reach:

images interpreting books, appropriate responses interpreting ambiguous questions, words interpreting definitions and vice versa. The ritual behavior of a rank of soldiers interpreting the trumpet signal /at-tention!/ gives us information about the cultural unit <<attention>> conveyed by the musical sign-vehicle. Soldiers, sounds, pages of books, colors on a wall, all these etic entities are physically, materially, materialistically testable. (T, pp. 71-72)

What seems to lie, at least in part, behind this heavy emphasis on the materiality of cultural signs is Eco's need

to make semiotics academically respectable by suggesting that its object has a determinacy that is equivalent to the kind we associate with the physical sciences and that requires the same "toughness," the same objectivist detachment. But it does not take much pondering to realize that testability in semiotics does not mean the same thing as it does in the physical sciences. In physics what defines the speed of light for instance is some discrete theoretical model that may be disconfirmed as well as confirmed by evidence adduced from the physical world. It is this very possibility of disconfirmation that allows a science like physics to attain the kind of strong consensual authority and rigorousness of method that is impossible in the social sciences, at least to the same degree.

Interestingly enough, it is Eco himself who proposes that semiotics must be a social science. While he is entirely justified in attempting to devise as rigorous a metalanguage as possible in order to define the sign, his theoretical model cannot possibly stabilize his object in the way the model of the physicist can fix his (although even in physics it may be argued that in some areas the object is not altogether stable). This instability of the sign derives from the very same principle on which Eco bases his own model, namely, the principle of unlimited semiosis, which is merely the diachronic phase of the interpretant's activity: one sign is interpreted by another sign, which is interpreted by another sign, and so on indefinitely along an asymptotic path. Unlimited semiosis is in fact Eco's third and most compelling reason for detaching semiotics from psychology. Since signs completely explain other signs there is no need for some speculative psychology of sign users. And so on the one hand Eco stabilizes the object of his study by appealing to the principle of unlimited semiosis, thereby banishing the destabilizing influence of subjectivist theorizing; but on the other hand this same principle of unlimited semiosis implies that his true object is not a stable and discrete structure to be described once and for all but rather an on-going process of structuration that by definition cannot be fixed. Now if the object of semiotics is unstable, then it would seem to be part of the task of this discipline to elucidate the terms of this instability. A semiotic theory that avoids the psychological level of semiosis in the way Eco's does cannot, as I hope to show, adequately do so.

It might be argued that Eco does in fact posit psycho-

logical categories. After all he does speak of a "labor" that must be presupposed in the producing and choosing of signs, and in his theory of reading he also mentions a "Model Reader" that must also be presupposed in accounting for the meaning of text-performances. But the trouble with such notions is the very fact that they do function as presuppositional categories and not as operational ones. As far as psychology is concerned they serve as walls and not as doors. The physicist does, we know, successfully apply a presuppositional category when he speaks of "nature," a concept that for his methodological purposes makes ontological questions irrelevant (does reality exist?) as well as sociological questions (to what extent is a concept of nature determined by culture?). But it is, once again, the stability of the object in physics that allows such successful use of presupposition.

Some signs are, to be sure, more stable than others. It is interesting in this light that Eco's idea of the interpretant applies best to examples where the question of change--which is really the question of the mind actively and creatively interacting with culture--is of little importance relatively speaking. The ritualized behavior of soldiers interpreting a trumpet note is in one sense a good example of how one cultural sign interprets another, but the successful way it minimizes the role of the mind in such an interpretation is precisely what is misleading about it. A similar example is that of the Rosetta stone, which Eco uses in an essay on Peirce to illustrate the principle of unlimited semiosis. We are to think of the Greek on the stone as being interpreted by an endless flow of interpretants moving out in one direction; and then on the same stone we are to see the Egyptian, which is interpreted by this Greek passage, as becoming the initial interpretant of an endless number of Egyptian texts moving out in the opposite direction (see R, p. 197). But once again the trouble with such an example is its neatness, which here minimizes the crucial question of cultural change and the way the individual mind affects this change. We may note, for instance, that the writing frozen on the stone suggests the same state as that of the ancient languages they represent, languages that antiquarian disciplines have preserved in a changeless historical moment. It should also be noted that the linguistic areas with which the antiquarian reader is concerned here involve lexical and syntactic features that are relatively free of dispute. Eco is thus free to speak of cultural signs

interpreting one another as if there were no intervention on the part of the psychological dimension of semiosis, as if in other words culture ran by itself. Like the response of the soldiers to the trumpet, what is of interest here is not the peculiarities of an individual response -- the actual historical peculiarities, say, of Champollion's brilliant deciphering of this text -- but rather a certain universality carrying the suggestion of timeless truth.

It is true that Eco does, to some degree, account for the dynamic or processual phase of semiosis as well as its structural phase. He talks in his Theory of Semiotics, for example, of code-modification as involving what he calls over-coding and under-coding. His favorite example for illustrating code-modification is the artistic text, which from the perspective of either writer or reader dramatically reveals a continual re-scripting of codes and which in Eco's hands serves as a kind of Galápagos island in that it furnishes an accelerated version of cultural and therefore semiotic evolution. And even in the passage where he speaks of the Rosetta stone, Eco also gives a less mechanistic version of the interpretant, declaring that the whole of Stendhal's Le rouge et le noir "should be considered an interpretation of the proposition 'Napoleon died in 1821'" (R, p. 197). With such an example Eco thus accounts for the more creative "inferential labor" implied in the relation between sign and interpretant, thus following Peirce's notion that the interpretant does not merely transfer knowledge, it adds to it. And yet Eco's examples of the more creative interpretants do not succeed in illuminating semiosis as a changing process nowhere near as effectively as his more mechanistic examples illustrate semiosis as a structure. The reason for this lack of success is obvious. It is more difficult to pretend-- even from the most rigorous semiotic perspective and even for the best methodological reasons-- that an interpretant like Le rouge et le noir involves only cultural processes. Can we at least say there is an historically individuated locus we call "self" continually creating this collective thing we call "culture," which in its turn continually creates "self"? Or can we postulate any generative dialectic between psychological processes and cultural processes? Not in a theory refusing to postulate a concept of mind.

There is in Eco's writing, moreover, some confusion as to what exactly constitutes the difference between semiotic structure and semiotic process, a confusion that seems very

much a part of his unwillingness to posit a culture/mind opposition. Let me give one brief example. At the beginning of his Role of the Reader (1979), Eco criticizes Lévi-Strauss for claiming that a reading of Baudelaire's "Les Chats," conducted in an article by Lévi-Strauss and Jakobson, uncovered a crystal-like structure in the poem. Eco's criticism leads us to infer, (as does much of what he says in his Theory of Semiotics) that in the most general and important sense, the meaning of a poem is an on-going process, not some fixed structure to be uncovered like a diamond once and for all, that any given reading, even one equipped with the scientific apparatus of linguistics, is still only a reading located on an historical path made up potentially of an indefinite number of readings. On the other hand, William Ray (1980) points out that Eco's own reading in his Role of the Reader of Alphonse Allais' Un drame bien parisien seems to claim that textual meaning is to be conceived, not as a process in which Eco participates, but as a univocal structure which Eco definitively uncovers. Ray in effect lodges the same complaint against Eco that Eco lodges against Lévi-Strauss. Ray's criticism strikes me as quite valid. In his reading of Allais' story Eco enlists modal logic and possible-world theory manifestly to build an apparatus for demonstrating his theory of reading, but as it turns out this same apparatus is used to justify his own reading of the text. Interestingly, Allais' story is a riddle narrative, a text with a secret. And one is hardly surprised to find at the end that it is Eco who finds the secret, leaving us with the tacit proposition that a text is a diamond mine after all. A great part of Eco (not the only part, I grant) seems to like nothing better than to construct a rigorous and formal structure that will make definitive connections. It is the part that motivates his establishment of an important semiotic theory, true enough. But it is also the part that induces him to "solve" a puzzle-text with a triumphant air, the same part too that makes him reluctant to integrate a concept of mind into his semiotics -- since such an integration might preclude some of the tidiness his formalist methodology provides.

I can agree with Eco that culture does explain itself by itself, but the crucial fact here is that it does not run by itself. The part of human organization we call culture cannot be treated in every respect as if it were an autonomous agency. When treating fundamental questions of cultural information, such as questions involving a structure/process opposition, we need to define culture as only one level within

an ecological hierarchy of several interacting levels including the psychological, the physiological, and even the chemical. This view that culture is part of an ecological hierarchy belongs, I realize, to the very general questions raised in information theory, but its implications bear on more than this field. It is this very general area that Eco's semiotic theory needs to adopt as part of its own territory. He is so anxious to draw boundaries, to make semiotics a rigorous discipline, that he overemphasizes the differences between the object of semiotics and the object of related fields, the object of psychology, say, or the object of information theory. There is nothing wrong with trying to define as precisely as possible the differences between for example a dream and the publicly coded narrative of a dream, but obviously one is still better equipped to understand how the two are different if at the same time one understands how they are also the same.

One way Eco's semiotics might achieve this more general base lies in a more extended notion of the interpretant, a notion that Peirce's theory already provides. Where Eco thinks of the interpretant as local to the cultural context -- treats it in fact as if it were a product of culture -- Peirce conceives of it in so general a sense that it transcends human organization altogether. For Peirce the interpretant does not derive primarily from some logic of culture but from formal logic itself. The interpretant is an essentially abstract term having a tri-valent relation with two other terms: the representamen (or sign) and the object. Sign, object, and interpretant correspond respectively to Peirce's categories of quality, fact, and law; and these three in turn correspond respectively to even more abstract categories of firstness, secondness, and thirdness. I have no time to elaborate on the many complications of his theory, but a number of you here are, I'm sure, familiar with them already. I do want to stress, however, that Peirce's more abstract, more general notion of the interpretant seems precisely what Eco's semiotics is lacking. For Peirce the triadic dynamic of sign, object, and interpretant applies to all processes of synthesis and growth. It happens to occur in cultural processes, but may also occur in other processes as well, including psychological processes. In a paper written around 1902 (Buchler, 1955: 100), Peirce suggests that possibly the tropistic relation between a sunflower and the sun, and the reproductive relation between this sunflower and its offspring can be construed -- if one prescind from

other conditions determining reproduction -- as parts of a tri-valent relation in which the sunflower would be the sign (or representamen), the sun the interpretant, and the offspring the object, which in its turn becomes a sign turning toward the sun-interpretant and reproducing further offspring in a kind of unlimited semiosis on a strictly botanical level. Perhaps if Peirce had been familiar with genetics and DNA he might have argued for it in the most basic processes of life itself. For many Peirce's theory of the interpretant may seem so vague and generalized that it may well appear to be little more than a tautology. I myself believe that a good deal of basic and explicit research into Peirce's semiotics still waits to be done. Whatever the verdict, the fact will still remain that semiotics must include principles that are general enough to encompass a concept of mind as well as a concept of culture. Does this necessarily mean a return to subjectivism? I don't think so. Eco is certainly right in his effort to carve out for semiotics a precise object with a view toward rigorous and systematic research. My one addendum is that such carving ought to be based on assumptions whose generality exceeds that object.

NOTES

1. The two texts of Eco cited in this paper are abbreviated as follows: R: The Role of the Reader; T: A Theory of Semiotics.

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SOCIOLOGY AND SEMIOTICS: TWO SCIENCES OF THE HUMAN

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1) Classification of the Sciences of the Human

Many classifications of the sciences have been made from the time of Francis Bacon. Bacon's classification is based on the known faculties: 1) memory, 2) reason and 3) fantasy. Memory produces history (sacred, civil and natural). Reason leads to science itself, which covers: a) natural theology, b) the sciences of nature (which, in turn, subdivide into metaphysics or the study of formal and final causes), and c) the sciences of man (which are subdivided into a) logic or science of reason, b) ethics or science of the will and c) science of society). Fantasy reveals itself in poetry.

In accordance with the object of study, Ampere grouped the sciences into: 1) cosmologicals, and 2) noologicals. The cosmological ones cover mathematics and physics, strictly cosmologicals, as well as the natural and medical physiological sciences. The noologicals gather psychology, ontology (the nootechnical sciences) and ethnology, archaeology, history and politics (the social sciences).

Schopenhauer classified sciences as pure and empiricals. The pure sciences are in charge of the principle of being and of the principle of knowing. The empirical ones are concerned about the causes, excitements and reasons.

On his part, Comte started from the idea of "positiveness" and ordered the sciences hierarchically, in accordance with their higher or lower positiveness, beginning with mathematics, then astronomy, physics, chemistry, biology and

sociology, ending up with philosophy, that is, with a sense of growing complexity and of a decreasing generality.

Wundt grouped the sciences into two great cores: 1) the formal ones and 2) the real ones. The first group is formed by mathematics, the second one by the sciences of nature and the sciences of the spirit, which must be studied from three different points of view: phenomenological, generical and systematical.

Pierce divided the sciences into branches: 1) theoretical and 2) practical, and based on them derived a number of subdivisions. Most recently, Piaget has made a first division: 1) sciences of nature and 2) sciences of man. In turn, he has divided them into noomotethical sciences (they try to establish "laws"); historical sciences (their objective is to rebuild and to understand the development of the expressions of the social life of the time); juridical sciences (which deal with standards and their compulsory nature) and, philosophical disciplines (about being and the duty of being).

All the classifications that have been made of the sciences vary according to the point of reference from which they begin. Bacon's classification starts from the faculties that are necessary for knowledge; Ampere's, from the object of study; Schopenhauer's, from his principles; Comte's, from the degree of positiveness; Wundt's, from the nature of the object of study; Pierce's, from the levels of abstraction. Piaget's classification, which follows Comte's guidelines, is one of the few that faces the problem of new fields of research. But these classifications, in spite of agreeing as to the level of development of knowledge at the time that they were formulated, have gradually lost their effect and many are already obsolete. Nevertheless, they are useful because they help us to systematize and to classify knowledge from difference points of reflection.

A contemporary classification of scientific knowledge

For our purpose at this time (of relating semiotics with sociology), we will start from the schema of Foucault's classification for the following four reasons: 1) because it stresses the fact that man is not reduced to one determined function, but that he is a totality, 2) because it implies the character of the human being, which is basically social,

3) because it is actual and 4) because it is a diachronical division of knowledge.

Foucault's diachronical approach shows that in the same proportion that science goes from the physical to the psychical, going through the vital, it stops from being objective to becoming increasingly symbolic. In this step from the objective to the symbolic we find a special form of objectivity, which is called the intersubjective. As Crick (1973) says: "In human studies, objectivity is one type of disciplined intersubjectivity."

According to Foucault, modern episteme (or the systematic rational knowledge) is formed by a trihedron that covers: on one side, mathematics and physical sciences; on another side, linguistics, biology and economy; and, on the third side, philosophical reflection.

The sciences of the human (that is, those that have as an object of study the products and changes of man) are excluded from this epistemologic trihedron; but they are in the convergence of these different types of knowledge, because they have the project of using a mathematic formalization. They come from patterns or concepts taken from biology, economy and linguistics and are heading (like philosophy) towards the thought of the radical bounds of man.

On his part, Foucault is not only a historian of the idea but he is also a critic of the present episteme. In effect, he shows that paths for the improvement of knowledge and (as well as Crick) gives another way for the episteme, in which he looks for a higher and more adequate consideration for the human. In order to reach this episteme, we have considered that social scientists must make a displacement of the function of meaning, aware that facts cannot be radically distinguished from values in some disciplines in which facts are loaded with theory and the theoretical elections are loaded with value.

The sciences of the human, when dealing with life work, and the language of human beings, do not consider a simple linear progression of their chores. Because the behavior of man is not linear but dialectic: it does not move ahead in a single plane but in different levels of depth and, when doing so, it produces a group of events that is rather more complex than simple, on account of its own imbrications.

The sciences of the human deal with the changes in which men take part, either actively or passively; changes that set men free and in which they move, work and speak, express themselves, communicate and interchange.

2) The Sense in the Sciences of the Human

The sciences of the human are sciences of the actions of men; of actions endowed with sense. Man gives to his actions a sense that can be interpreted by other men, and their interpretation of the meaning of the action can be the same or different from the one mentioned by the actor. Man, when behaving, guides his action towards certain objectives and, whether he attains them or not, these objectives give sense to his actions. These, in turn, will be interpreted by other individuals with the same or with different meanings to those given by the person who is acting.

Both, the actions and their interpretation, have sense and meaning. They have sense when they guide the action; they have meaning when the action and the object are related to each other. Therefore, sense makes reference first to expression and, secondly, to communication, whereas meaning in the first place makes reference to experience and in the second place to knowledge.

Sense and meaning are given on three levels: at the individual level, the group level, and the cultural level. On the cultural level, sense is obtained by reference to the schematics or to the action patterns accepted by a society. On the group level, the consensus and disagreement of the members of the group create variations of sense. And, finally, on the individual level, the attainments of the individuals have influence in and are influenced by the other two levels.

Therefore, we can consider the sciences of the human as sciences of the sense. These are sciences of the meta-epistemological duplications (far beyond knowledge, that is, far beyond the being to project in the duty of being, in the world of values). Thus, the complex reality of man is analytically accepted when projecting him on three planes: 1) the biology-psychology plane; 2) the economy-sociology plane; and 3) the linguistic-semiology plane.

Man projects himself on the biology-psychology plane as

a being that has functions, receives encouragements, submits, changes, adapts and reacts to the physical world and to other men, but--at the same time--modifies and dominates the physical world and other men through the means of adjustment that he uses as standards, in order to practice his functions and to carry out his actions.

Man projects himself over the economy-sociology plane when he turns up as a human being who has needs and desires that he tries to satisfy, who faces the world in which the satisfactory elements are scarce and in which he has to compete with other men to get them. For that reason he is often dragged into a situation of conflict that he avoids, from which he runs away or controls through the establishment of a group of rules, which, in turn, limit certain conflicts and bring out some others.

Man projected on the linguistics to the semiotics plane appears as a human being who wants to express himself, whose performance has meaning so that everything that he places around him (objects, rites, habits, speeches) form a coherent group and a system of signs, offered for the interpretation of his fellowmen.

The three main human sciences (psychology, sociology, and semiotics) depend for their total character upon their delicate imbrications with each other. For this reason we will try to define their specific functions and articulate them with respect to: in the first place, what we consider to be the privileged or primary point of view of contemplation (which individualizes each one of these sciences) and, in the second place, the secondary points that they can adopt and that allow their collaboration with the other two disciplines.

Psychology is, basically, the study of man in terms of performance and psychophysiological standards, that can be understood in a secondary way starting from conflict and meaning, rules and systems. Sociology is, fundamentally, the study of man in terms of rules and of conflicts that can be interpreted in a secondary way from function and meaning. Semiotics is, basically, the study of meaning and of the significative systems (texts, myths, and rites) which, secondarily, can be interpreted in terms of functional coinheritance or of conflicts and rules.

Each one of the sciences of the human, when dealing with its basic objective, tends to be constituted of simple objects for which it builds adequately pure methods, which taken to the very end in the reductionist way, turn into an "entelechiial" discipline. Whereas, when these disciplines are interconnected, they have mixed and complex objects which, consequently, develop methodologies that are full of unavoidable imbrications, thus becoming "real" disciplines. Disciplines are entelechiial when they analyze whether the structure alone (when dealing only with standards, rules, or systems) or the process (when approaching functions, conflicts, and meanings) or meaning (when approaching denotation and connotation), and they are real when they analyze--in its totality--structure, process and meaning in all its complex interrelations, taking into consideration the historical factor.

3) Sociology and Semiotics in the Study of Social Reality of Man and Ideology

If we consider the social reality of man as a complexity in which human interaction is closely linked to knowledge (to opinion and science or to doxa and episteme) and to the communication of men among themselves, we will have to study it in terms of conflict, function, and meaning. Meaning (in which we are now particularly interested) can be interpreted in terms of functional coherence and of the solution or production of conflicts--correlatively--of rules.

In order to study the social reality of man, we must accept that neither humanity in general nor global societies in particular, are unified; that there are differences of interests among societies, groups and members of societies; that these disagreements produce conflicts; that in order to solve them in our favor we resort (sometimes legitimately, other times illegitimately) to a rule which has a general meaning and that this is what gives shape to ideology.

Ideology arises from two basic processes: one related to knowledge and the other related to interests. The first process goes from an involuntary lack of knowledge, going through knowledge, that suffers an inflexion from a voluntary lack of knowledge, and that can reach an acknowledgement (a new meeting with the voluntary lack of knowledge). The second process goes from the absence of differentiation of interests, going through the consecration of the idea of

justice, that changes from the desire of dominating justice for its own benefit and that may finally come to a redistribution of justice.

From the moment of this acknowledgement, we visualize that in order to achieve a coherent interpretation of social reality, we must face the problem of ideologies and their expressions; that we will have to face this problem through an approach in which we link sociology with semiotics and psychology.

Durkheim defined sociology as the science of the institutions, their genesis and their operation (considering the institution as every belief and every behavior established by the collectivity that is born when a need and a social possibility converge.)

Summer considered that habits are acts that men carry out around their main interests: conservation, protection, perpetuation and security; reasons for which they form groups and establish social institutions. Summer's consideration reveals the teleological character of every social action to make reference to the goals, thus, making reference to meaning in its deepest sense.

On the one hand, institutions have the following integrating elements: opinion, belief, knowledge (myth, popular legends, religious concepts, moral beliefs. . .) and expression (articulated language, rites, ceremonies. . .), all of them interlinked and acting among the members of the society that participated in relation to competence, conflict and cooperation.

On the other hand, semiotics was defined by Saussure as the science that would study the sign in society; a discipline that would cover both the analysis of graphic signs, as well as the verbal and non-verbal expressions of individuals.

The creation and the use of signs is carried out in order to express, understand and communicate emotions, experience and knowledge; the sign creates and recreates the images of men in society; it is the substrate of identification, cooperation, competence and conflict.

Very often, the concept of the semiotic discipline has been incomplete according to the linkage made with the sign,

whether with the articulated language, knowledge or users; on this basis we can speak about a tripartite division of semiotics: syntactics, linked to linguistics; semantics, linked to logic; and pragmatics, linked to the sociology of knowledge (or the study of ideologies).

Human interaction presents different levels of depth and on each one of them reality reveals itself as a group of meanings which imply that members of the society create and receive encouragements, impose and reject standards, keep a functional coherence, or break into conflicts. In all this process of interaction, verbal and non-verbal expressions can bring us closer but can also take us far from reality and, at the same time, although they can have a persuasive value (rhetoric), they can also destroy consensus and generate social disagreement. The persuasive value of these expressions--established on a partly rational, partly irrational basis that resorts to the passions and feelings of the public--can be better than that of serene reasoning and object aspiration, and can correspond or not to ideological contents inasmuch as to the ones that can take advantage of their tools to enroll the largest number of members of societies for the attainment of a common action of collective benefit. But they can also deviate the attention from their vital interests and put them at the service of the selfish interests of the rhetorical, ideologically framed.

Consequently, ideology plays a central role for the human sciences. It is ideology where we can visualize the natural relation that can and must be established between pragmatics and the sociology of knowledge, by means of which we can study signs in the present, the past, and the future; signs that are incorporated in different significant forms issued with different intentions of meaning by different people, nations, classes, and social groups who, as users of such signs, look for different values that are subject to different hierarchies and who support different standards and practice different ways of living (cg. Levi-Brül) in which different interests are produced that place them in situations of conflict, competence, and cooperation.

SEMIOTIC THEORY AND LANGUAGE LEARNING

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Language changes. A linguist believes that change is the very nature of language, that language is in the throes of change all the time. The extent to which language has changed from Chaucer's Middle English, or even Shakespeare's Elizabethan English, can be clearly seen. And today advanced electronic computer technology is having a revolutionary effect upon what constitutes the language of our culture: that is, the language in which cultural affairs are carried on. The language of our culture is no longer verbal language alone, but the whole array of electronic multi-media, particularly television and computer. It is this new cultural language that must be the concern of language educators, which I believe includes all of us who are concerned with education.

One very important technological change in the language of our culture is the relatively recent capability of generating, recording, and transmitting visual information. Now visual information very often accompanies verbal language in our mass media. Indeed, a knowledge of visual language is necessary for developing the kind of intelligence needed to function effectively in the contemporary communications environment. Since visual information is now an integral part of our mass communications--film, television, magazines, newspapers, and most importantly, computers--I suggest that it is time language educators take an expanded, semiotic view of just what does constitute language in our culture. With the computer all individuals have the potential for generating their own visual information. Such a proliferation of visual information puts it on a level of importance with verbal language

as a means of carrying on cultural communication.

Since language has changed, language education must adapt to the changes in order to prepare individuals to function intelligently as we rapidly approach the 21st century. Semiotic theory is a tool for analyzing the contemporary communications environment and a heuristic for generating pedagogical theory and practice.

My semiotic point of view grows out of the origination of semiotic theory in the early Greek medical concern with the belief that a symptom is a sign indicating some condition of the human body. This broad, basic semiotic concept can be applied to all of life in the sense that any phenomenon can be observed as a sign having meaning.¹ The value of semiotics to pedagogical studies is that the process of semiosis, or making meaning through the reading of signs, forms a heuristic for discovering meaning. The semiotic process moves us toward an understanding of what a phenomenon signifies. All phenomena, cultural as well as natural, can be observed and contemplated for discernment of their meaning.

One of the more powerful phenomena in culture is language--so important that Morse Peckham recently expressed the opinion that "language is the principal thing that controls behavior."² I concur with this statement, but since language has changed, I find it necessary to redefine language so that it includes the contemporary electronic media which are now the language of our culture. Thus, the analysis of language in our culture must include "reading" the "language" of the media, such as television and computer, through which we carry on cultural communication.

Before we proceed, let me define language in an expanded way that will allow the concept of language to encompass the new communication media. In its traditional definition, language, according to the Random House Dictionary, is "the body of words and systems for their use common to a people who are of the same community or nation, the same geographical area or same cultural tradition." This is verbal language. A semiotic view of language, however, is embodied in the following more abstract definition of language from the same dictionary: "any system of formalized symbols, signs, gestures, or the like, used or conceived as a means of communicating thought or emotion," such as "the language of mathematics; the language of love." This definition expands

the meaning of language to include all semiotic systems, or all systems that embody and communicate meaning. Thus, electronic communications can be seen as language, or as a semiotic system.

This expanded definition of language has another extension: that it is a system, which implies movement, suggests that a language is a way of making meaning, and is therefore a process. Thus semiotics, or expanded language, can be seen as a process through which making meaning occurs in the "reading" of any system of signs. The study of language in the expanded sense, then, embraces the analysis of all sign, or semiotic, systems. Language study clearly includes the study of the new pictorial media, which are an inextricable part of the language of our culture.

To read the language of the media is to observe the qualities of the media and to understand their meaning. Used this way, the concept of semiotics is a heuristic to help decipher the meaning, or language, of the electronic communications media. One eminent quality of the language of these media upon which I focus my analysis is the quality of 'visualness.' Pictures now take their place in the cultural linguistic system, which has here-to-fore been occupied by verbal language alone. The term picture is used here to indicate any reproduction of information that is both graphic in nature and that represents the referent by imitation of its visual image. This definition excludes written or printed verbal language, the printing of which is visual because it enters consciousness through the sense of sight, but printed verbal language is not visually imitative of its referent. In the present analysis, it is their visual capability that draws the television and computer together; they both employ the cathode ray tube (CRT). Through semiotic analysis, then, we try to arrive at an answer to the question: "What is the meaning of these new media to contemporary western culture?" This is the question to which the late media mentor Marshall McLuhan addressed much of his theoretical study.

As far as I know, McLuhan never connected his thinking with semiotics, but his analysis of media was generally semiotic in nature. The Medium Is the Message, for example, was a semiotic study of the meaning of the medium itself--not the content of the message, but the nature and the meaning of the medium that carries the content. For example, one of his

views was that television brings visual information immediately, from anywhere in the world, directly into our homes; that has a significant effect because information (the Vietnam war, for instance) comes into the center of our lives.

McLuhan thought that pictorial information is a more holistic, simultaneous mode of communication in contrast to print which he characterized as analytic and linear. In an article published late in his life, he clarified his meaning in The Medium Is the Message in an explanation of the automobile as a medium. What is referred to is not, for example, the car, but its effects on culture.³ Here he applies the gestalt figure-ground concept in what I would consider an analysis that is semiotic in nature: he explains that the figure is not the car itself, but is the effects of the car; the figure, or the effects, is the complicated ground of services engendered by the car; for example, macadam highways and roads, traffic signals, auto insurance, and the entire world of oil and gasoline (here I would add OPEC and all its extensive effects on world economy), mechanics and parts, and motor car manufacture in general. This last statement brings to mind Detroit, its problems with the demise of the American auto industry, the ensuing effect of movement to the sunbelt, the struggle to reconstruct inner cities, and so on. The title of the article in which McLuhan explains this concept is "The Laws of the Media" which he identifies as a possible working title for the writing he was doing at that time. To elucidate the laws of the media would be, in the semiotic sense, to discover the system of how the media work as communicators, or in other words, to discover the meta-language of this electronic language, in the expanded sense of language as semiotic systems.

Using this somewhat individualized definition of the gestalt figure-ground metaphor, McLuhan spent much of his life exploring the effects of television and other electronic communication technologies, and their qualities as media, looking more at the effects of how ideas are delivered rather than at the content of the ideas. Of course, the pros and cons of McLuhan's views have been thoroughly discussed. What has not been discussed to any extent is McLuhan's indebtedness, which he himself points out, to Harold Innis' ideas in The Bias of Communication, published in 1951.

According to Innis, each new medium is created to overcome the outstanding limitation or limitations of the previous

medium. At the time he wrote, Innis was mainly concerned with radio, which had overcome the time and space limitations of print. Radio could transmit sound messages instantaneously through space, with no need to take the time required to produce and distribute a newspaper, for instance. In tracing the development of communication media, Innis points out, for example, the invention of paper by the Chinese. When paper spread to other parts of the world, its economy and ease of transportation provided control of communication over space. A rise in nationalism was brought about because languages, set in print, were concretely established; and this solidification of different languages helped to widen the separation between nations. Then with the application of power to printing equipment, it was possible to produce the materials necessary for compulsory education.⁴ Innis says, "we can perhaps assume that the use of a medium of communication over a long period will to some extent determine the character of knowledge to be communicated...."⁵

Following Innis' line of thought--that each new medium overcomes the limitation of the one before it--I would say that television overcomes radio's limitation, or bias, which is its restriction to the transmission of aural information only. Television overcomes that limitation with the development of the electronic cathode ray tube that is capable of transmitting pictures along with audio transmission. Extending the concept even farther, the bias of television is its inability for interaction with the user; this was the quality that emerged as a center of attention--that TV is limited to one-way communication. The next medium, the computer, overcomes television's one-way limitation with its interactive ability, and it enhances the visual capability by incorporating the CRT into its interactive technology. In other words, the computer shares with television the CRT, which makes both of them visual, while the computer is interactive as well. The computer user can produce or create visual information. Combining electric speed and its interactive capability with the ability to transmit both aural and visual information, the computer moves a step farther in expanding the capabilities of our communicative technologies.

The significance of the new electronic media is that they incorporate into communications more and more of the capabilities of the human body as each new medium moves toward the elimination of one bias and then another. Our human body is the model we draw upon to produce our communication technology

and as we move toward the extension of more and more of our sensory capabilities we are developing an expanded language that more and more nearly matches the language of the human body--the brain and sensory systems, and even the DNA.

The language of the human body can be seen as the system by which we recognize, intake, and process information in ourselves. J.J. Gibson's book The Senses Considered As Perceptual Systems presents a view that the perceptual systems influence and control the information that a human is capable of receiving. The new media, which are capable of generating, recording, and transmitting more perceptual information, formulate new language capabilities that in the long run affect what we must consider to be intelligence in our culture. With the addition of visual imagery to our communicative abilities, we expand the possibilities for developing more of our intellectual potential.

The general definition of imagery I am using is not restricted to visual imagery, but it is the general ability to form mental images, figures, or likenesses. The word imagery is derived from a Latin root meaning to imitate (Random House Dictionary). Thus, imagery can be seen as the mechanism inherent in the human body's information system that produces an internal likeness or imitation of phenomena in the world outside ourselves. This is a broad, or expanded, definition of imagery. Instead of being related only to the visual sense, which is often the case, imagery can be a likeness of any sensory phenomenon. It can be hearing (such as the mental image of spoken verbal language), feeling (for example, remembering some feeling of movement like that of taking off in an airplane), and of course, seeing. Seeing is a very important sense because so much of our data for surviving in the world is provided by our eyes. It is because visual imagery is so important for our interaction with our world that I focus my attention on the visual quality of television and the computer.

What the computer does when it comes along is to swallow up the television's CRT (like TV swallowed up movies to some extent). And with the computer's quality of interaction, now the user is no longer a passive "intaker," but can actively use the tool to produce pictorial representations. Thus, we have a tool that allows the user to synthesize verbal language and visual imagery (as well as sound and mathematical language usages which are beyond the scope of this paper). Now our

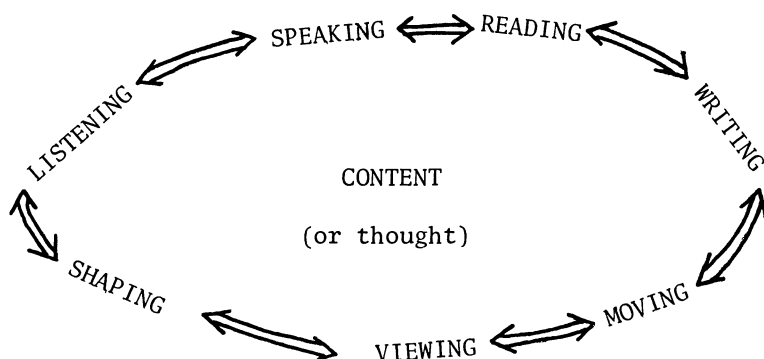
linguistic, or semiotic, abilities include more than verbal language--the medium upon which intelligence has previously been based, and through which it has been most often measured. Just think about tests: most are administered through printed verbal language and many are, as well, about printed verbal language. But, now that we can generate, record and transmit visual images, the potential exists for visual information, or visual art, to be of the same stature as verbal language, or literature, in our contemporary cultural communications. The new language technology now takes on special importance as it becomes a mass medium with widespread effects. Now that the micro-computer is quickly becoming a mass medium, mass intelligence is developing via the computer, and very shortly we may be impotent in our information society if we are unable to use the computer for our work and thought.

Now we are not restricted to communication through verbal language, which has traditionally been the most important symbol system for information exchange in our culture. Verbal language was so important that it has been considered by some linguists and psychologists to be thought itself. But the computer combines verbal language with the powerful potentials of visual, aural, and interactive or kinesthetic modes of communication. With the computer we can develop attributes of the brain, like holistic synthetic thought, rather than focus, as we have during the past several centuries, on the linear, analytic qualities of verbal language thought. In its synthesis of communication modes, the computer engenders a new language in the sense that visual, aural, and kinesthetic information fuse symbiotically to become more than just the sum of the parts.

Where do we go from here in the semiotic "reading" of our cultural communication technologies? Some emerging technological developments that deserve attention are robotics and laser technology. Robotics applies computer technology in more and more imitations of the human body, perhaps to the extent of, in the future, incorporating DNA information. Laser technology extends the speed and dimension of communication with its capability of transmitting--at the speed of light--three dimensional holograms, for instance. In the throes of these revolutionary changes in the language of our culture, we cannot afford to limit language education to verbal language alone. Language changes. Verbal language is important, but it has been swallowed up in the context of the new electronic

communications media.

Let me close with a model that communicates an expanded image of language education. This model grew out of my work with a small study group of Australian and New Zealand language educators at the 1980 International Conference on the Teaching of English in Sydney, Australia. It expands language study to include the visual, aural, and interactive capabilities of the computer.



NOTES

1. This definition is similar to Umberto Eco's broad definition of semiotics in his Introduction to a Theory of Semiotics, Indiana University Press, Bloomington, 1976.
2. Morse Peckham, in a speech to the University of South Carolina English Department, Columbia, South Carolina.
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4. Innis, H., 1951, "The Bias of Communication," University of Toronto Press, Toronto, p. 50.
5. Ibid., p. 34.

IX. ARCHITECTURAL SEMIOTICS

ARCHITECTURAL SEMIOTIC ANALYSIS: A DEMONSTRATION

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The emphasis in this report is upon a semiotic analysis of a particular building through the identification and operation of codes. Several assumptions were made. No attempt is made to review the literature on semiotic analysis or to elaborate the assumptions. The demonstration indicates that the function of codes reveals signs and their meaning.

Semiotic analysis attempts to discover what is there to be read. What was intended by the architect may become apparent. But the codes which function for the designer may not for the viewer. The building has identifiable rules and conventions for the codes and sub-codes which direct the systemic signification of the building. The set of codes provides the basis for a synchronic interpretation.

The method can be considered empirical and objective. Acceptance of code types for particular buildings can be expected. It might be possible to identify all the notions which could have the status of codes. However, for each specific building, the ordering principles which give logical and actual internal connection to all the codes of the building could be identified from the relevant documentation (cf Barthes (1964) (1967: 95-98)).

Consistent with the design activity and the complexity of professional constraints and opportunities, three code categories were identified. These are: architectural codes; building type conventions, program requirements and external constraints; and technical codes. Building typology and the

program were classified together and these codes may have a generative influence on the interface of expression and content. Table 1 indicates the codes within the categories. Table 2 explains the formulation of the codes as they function inter and intra the two planes.

The building chosen for analysis, The Museum of Anthropology, designed by Arthur Erickson Associates, was completed in 1976. The Museum is primarily a research and teaching institution for Northwest Indian culture but there is also an extensive public program.

The Museum is located on the cliffs immediately above the south shore of Georgia Strait at Point Grey, the promontory at the entry to Burrard Inlet, Vancouver, Canada. The University of British Columbia is to the south of the Museum on an orthogonal grid. During World War II there were extensive defence installations on this coastline.

The building, by its very nature, is an answer to climatic, behavioral, economic, and symbolic aspects, (4-function model). All these contribute to the formation of the way of life that the architect decides to project through the particular building. This happens by the elaboration of codes and sub-codes, organized systemically. He translates them through his personal attitudes, values, and architectural style.

The analysis proceeds with the identification of the operating codes in the Museum. The building program, articles in the architectural press, a book by the architect on his own work, and newspaper articles were consulted. The codes specific to the Museum are given in Table 3. Their operative function is explained in Table 4. Two codes, architectural order and rhythm, are read to illustrate how the meaning of the building is exposed. The parti of the building derives from the Y axis, perpendicular to the site, intersected by the X axis of the gun emplacements. The volumetric relationships of the building generated by the axes have an identifiable rhythm, a code which has a particular significance to the architect.

Table 1. Types of Codes

Architectural	Building type conventions Program requirements External constraints
1. Order (s) a. Rules adopted or adapted, b. Transformation of rules toward issues like inside-outside, solid - void, c. Dialectics of space-structuring. 2. Recurrent elements or shapes operative as symbols 3. Architectural issues of significance to the architect, 4. Architect's stylistic context and morphological expression.	1. Particular building type, 2. Program as generative or as functional possibilities, 3. Site and context.
	Technical
	1. Structure 2. Materials and texture 3. Colour 4. Lighting

Table 2. Plane of Context and Plane of Expression

CONTENT		EXPRESSION	
<u>Content</u>	<u>Expression</u>	<u>Content</u>	<u>Expression</u>
Ideas to be expressed, Functional requirements Context.	Architect's particular understanding, First mapping between ideas and their architectural expression.	Meaning of expressive systems, Architect's idiom and values.	Expressive system in three dimensional form.
Building type, Program, a. desired way of life b. ideological issues and symbolization c. activities, Context.		Architectural and technical codes as used for spatial and formal manipulation.	

Table 3. Codes present in the Museum

Architectural	Building type conventions Program requirements External constraints	Technical
<p>1. Order</p> <p>a. Intersection of Y with X axis, datum on Y axis</p> <p>b. Of particular consequence to inside-outside, primary and secondary paths,</p> <p>2. Recurrent formal element</p> <p>a. Post and Beam</p> <p>3. Architectural issues of significance to the architect</p> <p>a. space</p> <p>b. site</p> <p>c. light</p> <p>d. rhythm-cadence-movement</p> <p>4. Stylistic convention</p> <p>a. Late Modern</p>	<p>1. Museum</p> <p>a. Main permanent collection formally integrated with the design,</p> <p>b. Research collection always accessible to the public,</p> <p>c. Expression of main permanent collection dominates research and teaching.</p> <p>2. Program as an initiator of functional space structuring</p> <p>3. Building as a sign for Indian art and culture,</p> <p>a. Building as an artifact</p> <p>b. Metaphoric relationships.</p> <p>4. Site - proximity to marine cliffs.</p>	<p>1. Two structural systems,</p> <p>a. Structural system part of morphological expression</p> <p>b. structural grid</p> <p>2. Concrete and glass alternate for solid and void,</p> <p>3. Colours are primarily neutral,</p> <p>4. Succession of natural and artificial light and shadows.</p>

Table 4. Codes in Operation

Constraints	Architect's schema (personal codes) as a filter	Primary Generating Concepts	Codes	Expressive Artefact
Program Requirements 1. Museum for Indian Art 2. Sign of Indian Art 3. Research Museum External constraints 1. Context UBC Campus Existing gun emplacements 2. Site charact- eristics slope view cliff	Architectural idiom Late-modern Geometric form Post and Beam theme Issues of Importance Site Light Cadence Space	Gun emplacement horizontal axis Museum as a path Opening to nature Verticality symbol of totems	Architectural order Intersection of Y and X axes Permanent coll- ection on Y axes Research and offices as second- ary through datum on X axes Site Space Symbolism Post and Beam Building as metaphor Rhythm Morphological elements Structure Materials	Museum as a path which leads sym- bolically to nature. Continuous penetration of outside to inside Metaphorical use of post and beam.

1. The main entry on the south facade.
2. The west facade begins with the entry and the naturally lit foyer.
3. The small exterior court brings the gun emplacements into the building.
4. The west facade with the gun emplacements in the foreground.
5. The main exhibition hall: the post and beam theme is repeated and doubled.
6. The north facade from the Indian village.

1.



2.



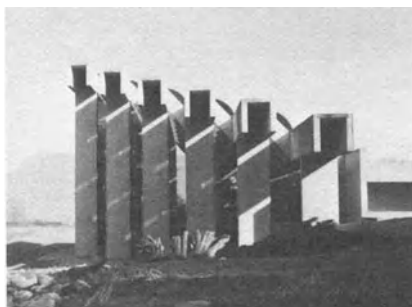
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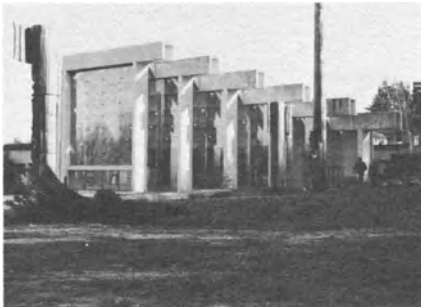
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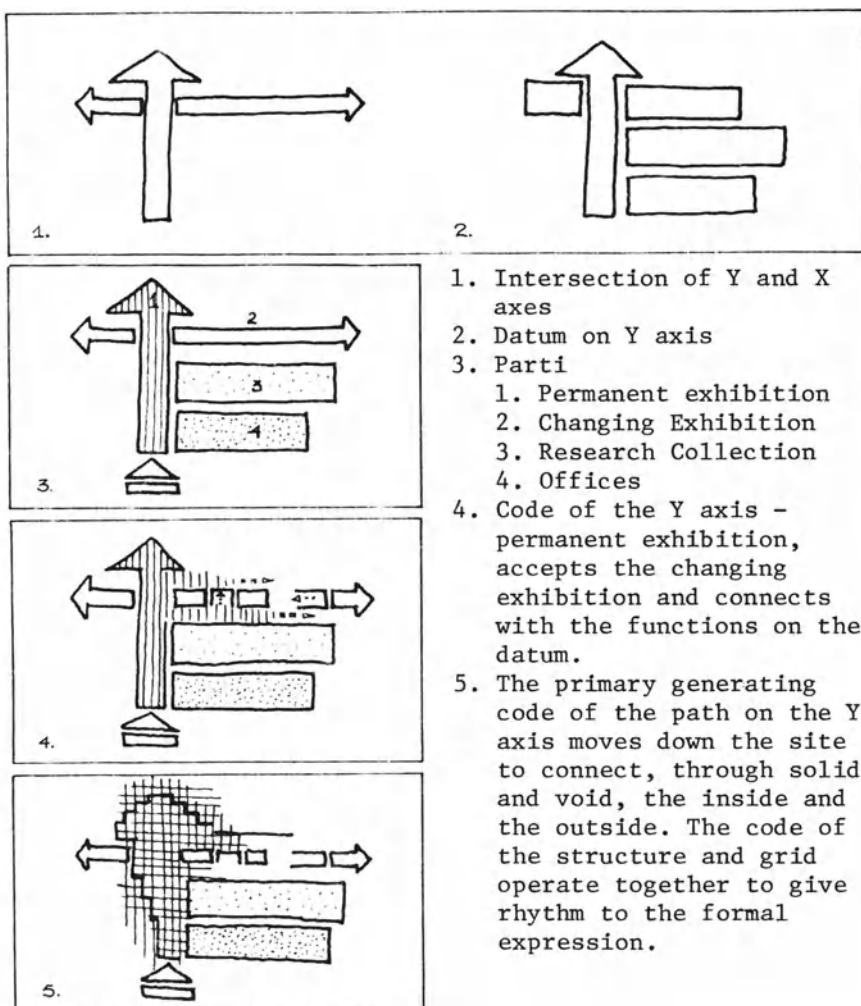


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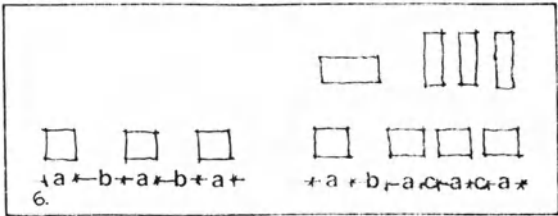
Reading of the Codes - Architectural order

The Museum was conceived as a path commencing with an introduction leading to an initiation and climaxed by a celebration. The path begins in shadow, opens to light and in so doing celebrates the proximity of Indian art to nature. The path is expressed on the main Y axis that forms the basic architectural order of the plan. The existing axis of the gun emplacements provides the other axis and intersects with the main path.

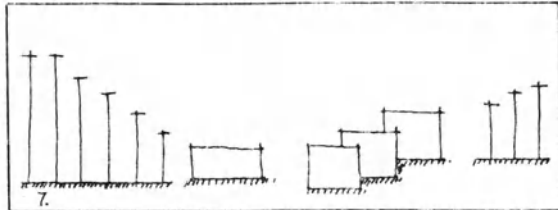


Reading of the Codes - Rhythm - Exterior

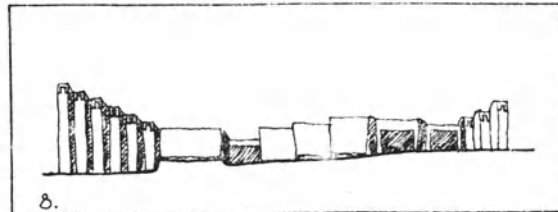
The rhythm of volumes, spaces, and forms follows an identifiable pattern. It arises from the juxtaposition of the different volumes and their particular dimensions, direction, proportions and morphological expression. The elements contradict and co-operate in response to the different functions and their formal spatial relationships. The operation of the code is shown in Table 5, where the code is analyzed in its elements and rules. Identified code signification reveals the expression of specific intentions through the architectural object.



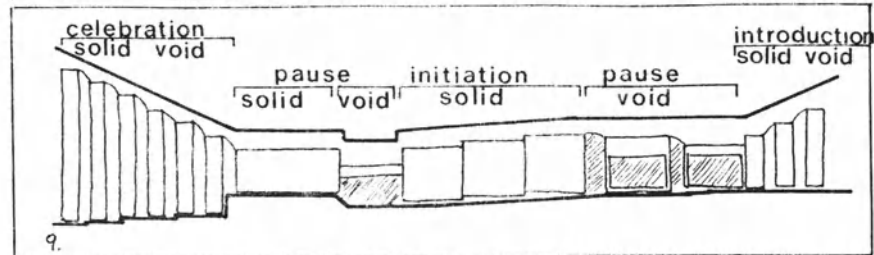
6. Rhythm is composed of elements and the rules of their combination.



7. The elements as combined in the west facade.

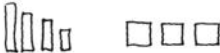





8. The rule of solid and void.



9. The complete expression of the three stages in the path.

Table 5 - Analysis of Rhythm

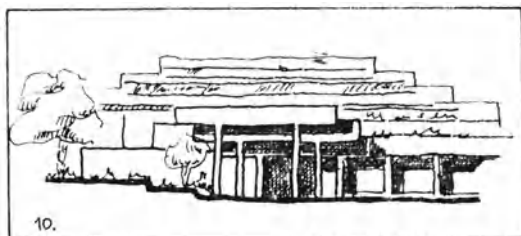
Code	Elements	Rules
1. Rhythm (as analyzed on the west facade)	Spatial elements different in Geometry Square Orthogonal Vertical Dimension	1. Combination  2. Solid - void 
Signification	Intent (Content)	Expression
Void for circulation and horizontal dimension in floor plan Solid for exhibition spaces Vertical (Solid-Void) for main exhibition hall	Permits visual contact with nature View unobstructed Vertical elements as signs for totems Contact with nature (forest image)	 

Interaction of Rules and Elements

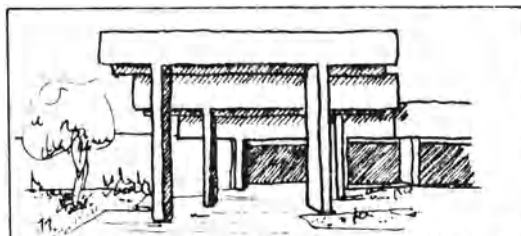
Rules	Geometry		The sub-code of rhythm could be analyzed in conjunction with the code of materials: solid - concrete; void - glass. Similarly, the coded relationships between materials and morphological elements could also be demonstrated.
	Vertical	Orthogonal	
Solid	A repetitive theme for the entrance and exhibition spaces	Exhibition	
Void		Circulation (horizontal axis)	

Reading of the Codes - Rhythm - Interior

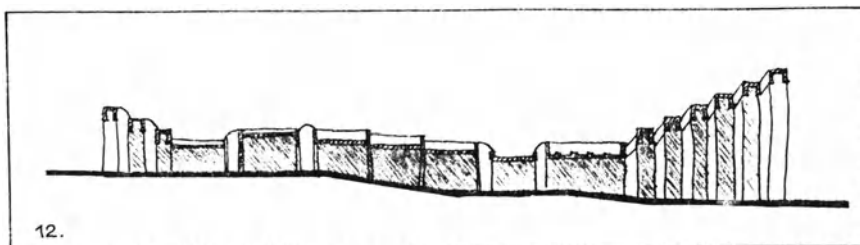
Movement on a path is a major code for the building. The character of the path depends upon the coherence of space, proceeding from light to dark to light, the structural grid, the floor and ceiling, the materials, permanent placement of artifacts, relationship of inside to outside and the changing views.



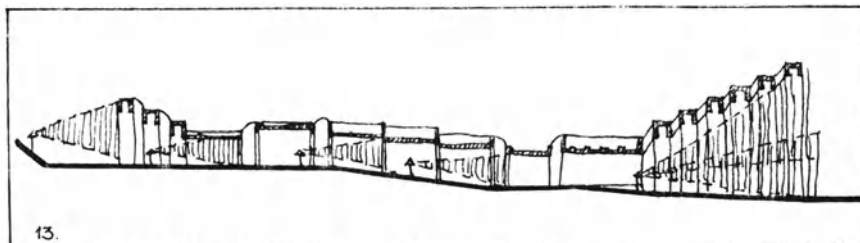
10. Symbolic element of post and beam as a sign for entry and introduction to the path.



11. Absorption at the entry and the symbolic use of a wall to disguise the path.



12. Interplay of light and shadow by the code of order and rhythm.



13. The contour of the site and roofline act in compliment for the final expression.

Table 6. - Identification of Signs

System of Codes	Elements as Signs	Meaning	Type of Sign
1. Datum on Y axis, along the X axis	Functional spaces placed parallel to the X axis	A metaphor for the way the NW Indian Village relates to the sea	Intentional index
	North facade	Reinforcing the metaphor	Signal
2. Y axis	Artificial lake (never constructed)	Museum conceived on a path.	Intentional index
	Sequence of spaces for more exhibition		
1. solid-void light - shadow	concrete and glass volumes	A metaphor for a forest	Intentional index
2. verticality	the poles	a metaphor for the totem poles	Index
3. solid-void verticality final stage of the rhythm	main hall	celebration of nature as the physical environment for the totems	Signal
4. structure	post and beam	a metaphor for the NW coast Indian Village	Intentional index

After the identification of codes, it is possible to identify the signs present in the building and their relationship to each other. Table 6 clarifies how codes operate on recognizable signs to reveal meaning.

The presentation in Table 6 is adapted from Jencks (1980:78) and Bonta (1979:28). The evident relationship between codes, signs, meaning, and sign type indicates that signs are specific to a building and become evident during the analysis of code operation. The signs in the Museum are of two types: volumetric spaces and building elements.

During the reading of relevant documentation, two metaphors were canonical; the post and beam as a metaphor for the Indian house; the relationship of the building to the coast as a metaphor for the Indian village. The analysis reveals that these and other meanings were intentional for the architect, e.g. the Museum as path and the proximity of Indian art to nature. Even though meaning attribution may change through time, the identification of codes and their operation is an empirical process which relates the signs to the meaning of the real object, the building.

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"MUSEMENT ON THE WHOLE". . .AN ATTITUDE TOWARD SPACE

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Musement begins passively enough with drinking in the impression of some nook in one of the three Universes. But impression soon passes into attentive observation, observation into musing, musing into a lively give and take of communion between self and self. (But) if one's observation and reflections are allowed to specialize themselves too much, the Play will be converted into scientific study.

C.S. Peirce, "Collected Papers of Charles Sanders Peirce," C. Hartshorne and P. Weiss, eds., 1931-1935, Vol. 6, paragraph 459.

1. Introduction

The recent appearance of a new architectural terminology seems to be an open invitation for architecture and semiotics to join forces. For architects, and American architects in particular, the quick absorption of the "new language" is testimony to the aridity of past architectural theory. In fact, in this country, issues of design significance had hardly been allowed any theoretical diet before about 1970.

This terminology is also of interest to semiotics because its form presumes that a semasiology exists which is able to explain the architectural event through semiosis. And once all this is admitted, either of these two inclinations is bound to raise the question of (1) how thoroughly architects

are prepared to entertain the regimen of semiotics; and (2) similarly, how disposed semiotics is to believe in the design of space. In other words, is spatial semiosis really possible?

Obviously, a field which is unable to avoid a reliance upon individual creativity is not likely to yield easily to the yoke of new theoretical regimens. It is against this carapace that we hear the promise of Charles Morris ringing, like a new manifesto created exactly for illumination of esoteric and archaic remnants of a presumably long perished Gothicism. His promised goal, as a general theory of signs, is the understanding of all personal and social forms and manifestations, "whether in animals or men, whether normal or pathological, whether linguistic or nonlinguistic."¹ In other words, his grand scheme is aimed at understanding man and his works through semiosis, and none of those works have resisted understanding more than the process of architectural design.

Both East Coast syntactics (Gandelsonas) and West Coast pragmatics (Jencks) seem agreed that something of the sort is needed, that design issues would be promoted through the purview of semiosis.

It may be pointed out, however, that either view, when it encourages "interpretation of building as sign," does so at the danger of reducing the study of design to the study of objects. And if, in the prescribing of new methods, it is presumed that the object embodies the act; that buildings, as the result of design processes, are somehow considered to be adequate themselves to fulfill the study of design; that, therefore, design as a process is ignored in favor of its objects; if so much is the outcome of new linguistic prescriptions, then semiotics will have forsaken its contribution to a general methodology, (as Morris preferred) to promote instead the return of 19th century effigial cults of form.

No better lesson remains from the demise of classical aesthetics than that it atrophied due to its inability to become a general methodology. It failed because it was constantly subsumed, in one way or another, by one dominating view of philosophy or another. If in nothing else, Morris was correct in his intuition that the hope for semiotic regimens lies in maintaining a non-specialized position as a

regimen general to all understanding. Many views have presumed as much and now dot the landscape with their failures, and, of course, the same fate may await semiotics. But while that outcome is yet speculation, it is for certain that the benefits of semiotics to architecture will be short lived if semiotics restricts itself to being one more impotent regimen dedicated to the study of architectural objects.

So much, then, is presumed to be the petition of this paper. It encourages a more imaginable means of sign interpretation, and suggests that now these interests too are the proper prerogative of semiotics. It doesn't doubt that Peircean objects, in their traditional interpretation, will continue to dominate most interests of study; but if both regimens don't treat of dual images, as representative of a mental process different from that which sees the Peircean object, then it is difficult to imagine that either regimen will enjoy anything more than the superficial relationship which now exists.

2. The Seduction of Semiosis

The heady anticipation of reducing art and architecture to understandable experiences, through use of sign theory, is an admittedly seductive prospect. Probably no other regimen can offer equal advantages, especially since aesthetic theory has ceased to function after being subjected to the domination of satisfaction theories. But as promising as semiosis may be, we should all be concerned lest the very seduction of its theory blind its users to the dualities involved. Historic dualities survive in this as in all things, and they declare that a conflict exists between the attitude of those who contemplate, and the attitude of those who prepare that which is contemplated.

The point in saying as much is not to "solve" the conflict, but rather to avoid ignoring it. The point is to develop understanding of both positions even as Morris might have it, and especially to explain to semioticians, that in accepting something like a dual image of semiotic interpretation, they not only are referencing that which is crucial to design, but that which has been fundamental to all primitive experience, even primitive existence.

Consider the duality from this viewpoint. Semiotic literature reaches its greatest stress level as it approaches

aesthetic interpretation. And while regimens which encounter aesthetic issues normally become mired in non-specifics (almost, it seems, in proportion to their desire for clarity,) there seems to be little excuse for doing it all over again. In this case, "doing it all over again" means re-doing the same old one-sided arguments. Yet, perhaps some element of perspective can be gained from a short paraphrase where both viewpoints are brought together, in preparation for discussing their measure as EEG.

There are, from a semiotic perspective, a great variety of ways for interpreting the aesthetic event, but two basic conditions generate more than enough problems. The first considers all signs in general as they may represent the Peircean object to be an axiological event; and the second is that same object in relation to the Peircean icon.

First, if both art and architecture are considered to be signs, as they often are, then their existence as an act of representation becomes most important. That is, aesthetic objects, as sign (for instance, as Peircean index), are taken to mean that certain elements in the object's constituency are received with axiological meaning. Representation is thus important in that it refers to the passing on of values; it becomes the means by which attention is drawn to some value exterior to the sign itself.

Second, is the reduction of aesthetic objects to a constituency of icons. In this case it need not be a matter of representation, for the icon, according to Peirce, may itself be the aesthetic object, thus not necessarily standing for values exterior to it. Addressed as an icon, the aesthetic object may be a self-complete axiological package, and need not even entertain an interpretant.

By the juxtaposition of representative signs to that of icon, it becomes obvious that not only are all signs bound to conventional expression thus freed from absolute meaning, (except icons), but how important it is to the field of design that a non-representative device be accountable in semiosis. Contrarily, all representation theory is founded upon the concept of conventions, and any succeeding observation inevitably remarks upon the resulting gulf between that which has existed (i.e. conventionally acceptable), and that which newly exists (i.e. not yet conventionally acceptable).

Of course, the icon becomes the instrument to fill this gap, and thus must be considered non-sign in order that it become acceptable of that which is not yet conventional. It has the ability to avoid the intermediary role of normal "signage," and thus become the aesthetic event itself. But then, the perceiver of the icon is left with the problem of experiencing something which is either outside semiosis, or something which is unexperientable. In other words, the icon solves nothing by calling the object another name, and the index resorts to conventional interpretation without explaining its ability to grow.

Peirce's three Universes only obscure the problem of any aesthetic ability to sense that which is newly created. Morris's acceptance of that obscurity led him to treat aesthetic experience as a simplistic caricature of ideography, a caricature which can only avoid the most central issue to 20th century design: the creation of spatial patterns. The argument may become more devious, but always arrives at the same eluctation....no competent aesthetic axiology exists.

The Peircean object, whether analyzed as representamen, object, ground or interpretant, shows very much the preference of semiotics to become involved with understanding the object rather than the aesthetic event. The attempt to objectify the aesthetic context is the same deductive mistake made by all logical-empirical attacks upon experience which avoid measurement. It fails to realize that the measured object is not the aesthetic event. The elusive object of inspection evaporates (into space?) while the logical knife begins to cut away the superfluous edges as it seeks the secrets of aesthetic response. Of course, there can never be anything left after such reductive surgery, for as the space, it has slipped away.

Deductive analysis destroys the aesthetic event it proposes to examine, as much as carbon dating destroys its own object of chronology.

3. The Lost Five or Six Per Cent

The aesthetic literature of semiotics so far promotes a brave new look at the world, but it is a look backward. It was the same stand taken by formal aesthetics in particular, and by metaphysics in general, and neither of those regimens are any longer effective. Somehow, Morris' semiotics must

account for events other than those to which conventional signs are presumed to be disposed, or accept the fact that it is riding into the creative future, sitting upon its ass, looking backwards.

The first lesson for a semiotic regimen, one which aspires to an understanding of signs which are human and inhuman, one which is linguistic as well as non-linguistic, is to realize that Morris remains hopelessly mired when he reduces aesthetics to conventional Peircean Signs. And perhaps the lesson there becomes the realization that Peirce himself was never satisfied with his ability to illuminate an aesthetic event as iconic communication.

Peirce approached aesthetics from an ontological pluralism of mind, matter and God. As in all of his philosophy, he was convinced of the potential for growth in all its forms of logic, and thus their content constantly changed. But it never progressed to the creative vs. conventional aspects of aesthetics, which eluded his logical grasp. His conclusion that aesthetics was entirely normative, and funded by ethical qualities as well as the sense of beauty, was so foreign an interpretation to his other ontological existences, that he ended by implying that while logic probably could offer little to aesthetics, perhaps the reverse was true:

...like most logicians, I have pondered that subject too little. (But, works on aesthetics) do seem so feeble. That affords one excuse. And then esthetics and logic seem, at first blush, to belong to different universes. It is only very recently that I have become persuaded that that seeming is illusory, and that, on the contrary, logic needs the help of esthetics. The matter is not yet very clear to me; so unless some great light should fall upon me before I reach that chapter, it will be a² short one filled with doubts and queries mainly.

More's the pity, for Peirce had an extraordinary perception as a logician. It was made the more extraordinary in that he should have presented so romantic an interpretation of "musing" in what had, by then, already become an anti-romantic age. Consider his comments about a non-logical part of the mind, comments from a philosopher who did not believe in intuition:

There is a certain agreeable occupation of mind which, from its having no distinctive name, I infer is not as commonly practiced as it deserves to be; for indulged in moderately -- say through some five or six per cent of one's waking time, perhaps during a stroll -- it is refreshing enough more than to repay the expenditure.³

He says that under the above circumstances, the mind is less favorable to study, and more receptive to meditation. It leads to a reverie, to "musement."

Here, it would seem, we have the crux of aesthetic pre-occupation, and it is contrary, not only to Peirce's own logics, but to all semiotic aesthetics which follows his lead. There is a "peculiar quality" of thought which lies outside the pale of logics. This is not surprising, for it has confounded the logical mind ever since the Greeks succeeded in postulating (and then demonstrating) that logical progression is a far more efficacious process for dealing with reality, than that other "agreeable occupation of the mind, which...(has) no distinctive name."

It is almost certain that this unnamed "five or six per cent of one's waking time" was the mind-set which Peirce understood the least, which continues to confound Morris' understanding of art, and which contains the secret to any understanding of aesthetics as they may be used to precipitate art. It is in that "five or six per cent" that creativity is revealed. It is in the mental organization, not in its object of created form, that the understanding must be had. It is in this Secondary Reality that we must look for a different sort of Peircean Sign.

4. The Second Reality

Evidence of the problem of space manifests itself in the language as a jumble of meanings, ranging from the distance between objects to the seemingly infinite void enveloping the earth. Language is an inverse measure of the problem of space for the German language, where "Raum" is far less specific than even the Latin "spatium," yet conversely, it is in German aesthetics that we first find the cognitive examination of its precedents in architecture.

Perhaps it is the cavalier treatment of so important a

perception which powered the German development. If so, its inattention has been much less fruitful in America than one might expect, for a great deal remains to be said, as Peirce's thoughts testify. Something of its lack has caused the study which is the subject of this paper, its direction being aimed by the question: "is a change in EEG a "sign" in the Peircean Model?" Results were hoped for which would establish a sign relationship for the use of space in architecture, especially in its pedagogy. It now appears that sign, as a conventional object, is impossible to adequately represent space.

However, none of this research should be adequate to serve as proof against anything produced by Peirce's logical mind. This investigation is not presented as proof of any such assertion. Rather this paper is the demonstration, so important for empirical evaluation, of precise measurements of the Second Reality, the experience of space.

In the investigation, it was found that the association of cerebral hemispheric changes in alpha EEG asymmetry correlated with changes in self-disclosure. The importance of this discovery lies in being able to follow EEG notations of either hemisphere, induced by linguistic formula, to an asymptotic extreme, and then correlate that extreme with EEG measures of self-disclosed images, taken to a similar but reduced extreme. The results of comparison were startling. Phi coefficients in these associations were found to be significant to the $p = \text{less than } .01$.

Two separate and distinct kinds of changes in alpha EEG were identified. They were (A) small negative changes symmetrical to both hemispheres, and (B) large positive changes asymmetrical to the right hemisphere. When coordinated with three levels of self-disclosure technique (protocol, content and hypnosis), the overlay of images revealed two distinctly different patterns, described as: (A) sequential-cognitive, and (B) holistic-emergent.

Change (A) in alpha EEG (symmetrical) may be associated with sequential-cognitive functions of the left hemisphere. Change (B) in alpha EEG (asymmetrical) is descriptively associated with the broader, spatial, continuum of holistic-emergent patterns of the right hemisphere. The first association (A) represents a linear stream of cognitive-sequential

experience, and when measured as reduced performance, is associated with small symmetrical decreases in alpha. The second association (B) represents a separate, pervasive, continuum of experience which is nondirectional and not conscious, but which intermittently erupts into consciousness as an alien intrusion. (During the investigations, measured intrusions occurred on the average of every 10 minutes, with the average duration of 5 seconds). This second reality, the continuum of experience (associated with right hemispherical asymmetry and Peirce's "lost five or six per cent"), was extracted from the first by hermeneutically following change to an emergent limit (i.e. self-generated).

THE PROCEDURE FOLLOWS THE MOVING DATA EDGE THROUGH INCREASINGLY EXTREME CHANGES, UNTIL THE LIMIT OF DISENTANGLED CHANGE IS REACHED, WHERE THE SECOND CONTINUUM (B) OF EXPERIENCE BECOMES PURIFIED, AND IS THEN REDUCED SEMIOTICALLY TO TERMS OF THE FIRST (A) STREAM (i.e., SEQUENTIAL-COGNITIVE AS OPPOSED TO ITS HOLISTIC-EMERGENT ORIGINATION). THAT IS, (B) BECOMES PARTIALLY EXPRESSABLE IN TERMS OF (A).

The overlay of images, the two different patterns revealed in The Investigation, are, in fact, the measurement of two distinct experiences. Until now the only object of concern has been that typically produced by (A), the sequential-cognitive mental organization. For at least 2000 years, experience has increasingly raised the cognitive level of this dominating object image (A) to be the exclusive object of investigation. These results now indicate that normal experience can be disentangled into the purified expression of two experiences, and therefore a tetradic model is suggested to be necessary to code each sign in terms of their revealed compound experience, producing one object of signification, plus one experience of meaning.

It should be made clear that compound or dual images would then refer to dual mental organizations, thus to that specific sort of human, social action called communication. It is that context within which this study refers to two separate mental organizations, the one attempting to define signification or the interpretant, the other attempting to reveal meaning. And it is a dual system of communication peculiar to the human species only. In other words, to be human is to experience and communicate about the world in two separate and parallel ways.

Admitting this much, we are at once referred back to ancient man. He possessed a mental organization dominated by revelatory and wholistic type (B) expressions, and was directly in line with primate evolution. He was exhibited as the human super animal, super hunter, super killer, marvelously in tune with, and bound to, his spatial environment. He was "homo finitus" (human bound).

The other, more sophisticated mental organization (A) is of relatively recent origin (thousands rather than millions of years) and gradually came into domination with the caesura that separates history from all which went before. It represents the breaking of an evolutionary impasse which kept animals bound wholly and inextricably to their environment. Its evidence developed with the fine motor control of the right hand--the tool-making spear-throwing hand, and the fine motor control of the bilaterally fused tongue--the complex language communicator. This mental organization broke out of the environment and communicated with itself; it became conscious of consciousness...it discovered self consciousness.

These two separate mental organizations of communication, with their separate evolutionary roots, exist side by side in the species homo sapiens, and in no other species. We have always known this; it is the composition of ancient human wisdom, and it is scientific consensus. It is so basic we are inured to its essential duality. There has been so little excitement over that which is so ordinary, that the problem has been to want to disentangle the more passive, non-conscious and subtle expressions of (B) from the active, cognitive domination of (A). And that is a long way from establishing precise measurements and creating a scientific dialogue with which to confront this Second Reality.

* * *

This research, which recently disentangled the Second Reality, (this bound-to-the-environment mental organization) is described as a non-reductionist method for following change to its extreme limits of individual spontaneous human behavior. Its procedure, in hermeneutically following change to its extreme limit, is demonstrated in its self-report innovation. The Gottschalk-Gleser Content Analysis Scales analyze self-report in terms of quantified ratings. The Gottschalk average of the subjects' anxiety ratings is compared to a

group norm. The difference from the norm is thus expressed as the subject's anxiety. To make this procedure work, changes within each subject's ratings must be minimized by averaging and by statistical weighting formulas. That is, the subject's self-report is reduced and analyzed in a sequential, linear and linguistic manner.

But this study has inverted the Gottschalk normalcy approach. The subject's own ratings have been compared only with each other, not with a norm, in such a way that changes in the flow of the self-report have been maximized; changes in ratings have been followed until they approach a limit. And it has been demonstrated that as these readings approach a limit, they are measurable and precisely expressable. As each limit is encountered it develops a data edge and thereby expresses the whole limit of that subject's experience without reference to other subjects, without reduction of the subject's ratings- and without statistical weighting formulas.

During EEG measurements, changes approaching limits in alpha have been treated the same way. Thus, when data edges of self-report correlate with data edges of alpha, they are shown to be mediated in separate hemispheres and be associated with specific images. In this way, the separate mental organizations, are isolated. They are expressed through separate physiological organizations, distinguished in terms of asymmetrical and symmetrical locations. Once correlated, they produce evidence of unmistakable duality in communication.

5. The Dual Edge Sword: A Rusty Proposition

The broad connection between man the hunter and man the laborer has been suggested as the changing evolutionary jointure between dual mental organizations. There is perhaps a dramatic ring to the breadth of that illustration which may be in danger of concealing its fundamental and vital mundanity. Consider, together, the more essential as well as the more trivial aspects of a package of daily communications with which everyone is in communion, both consciously and non-consciously.

Saussure illustrated his lectures with the famous little cartoon of two 19th century heads facing each other. A catenary line connected the mouth of one to the ear of the other, and vice versa. But, of course, that was only half of the story. It was the dominating lexical version of (A) alpha.

One must turn the page of that cartoon and visualize it as reproduced overlaid on the reverse side, thereby also establishing the concatenations between holistic-emergent (B) patterns of mental organization as well. On the other side, it would then represent the bound-to-environment experience of the Second Reality, as well as the mentality of dominating, freed sequential-cognitive (A) communications.

A more faithful cartoon would represent the truly human schema of a head receiving in parallel two different communications. In one, (A) the Peircean Object is actively linear, sequential, hierarchical and temporal; in the other, (B) the experience is passively spatial, holistic, atemporal and also non-conscious. It is the character of (A) to treat (B) as trivial, and this arrogance is exemplified in current architectural criticism where syntactics dominates pragmatics. It is, for example, inappropriate for popular syntactics to become mired in physiologics, as for example, where the attention would be focused upon only mouth and eye muscular responses. Thus, it is that syntactics ignores that the EMG from these muscles may be measured and expressed by computer tabulation as precise scientific communication. This scientific analysis is analogous to the normal reality of (A) unbound, linear, sequential mental organizations of communication which are able to learn; they learn to analyze and interpret facial communication along with verbal communication. Syntactics prefers the advantage position of declaring such pragmatics to be prenatal to the birth of sign, because truly it is a reductive spiral. Pragmatic physiologies become more and more complex, reducing the event of the object to longer and longer series of more and more precise forms.

The advantaged position syntactics enjoys is, however, a double-edged sword. Not recognizing the reality of communication as described above, (i.e., the duality of (A) and (B) mental organizations), it avoids the opposing edge of impossible reductionism found in empirics, and prefers instead the impossible ratiocination of sign in relation to sign. It prefers the latter, but neither position alone is all that desirable as design process. In both cases, the more complex their analyses become, the less holistic they are, and the more alienated they become from a position bound-to-space and its potential methodology of spatial as well as linear communication.

As an example, the entirely opposite viewpoint may be

supposed, where (B) mental organizations might dominate perception. In the case of bound-to-space perceptions, they could absorb both words and facial changes holistically, but of course with different results. It has been measured that the whole body proprioceptively mimics verbal communications. Certain verbal communications are known in the viscera before they become available to the mind. In these cases, the words existed as part of an atemporal flow of "livingness" and emotion, of being in the world. It is commonly described by physiologists as the existant chaos, out of which vivid, whole, patterns of experience seem spontaneously to evolve. They are, according to Prigogine, self-generated.

Naturally, one should not isolate and over-emphasize this holistic experience of spatial patterns any more than one should hyperbolize sequential-linear non-spatial objectification. Rather to be emphasized is the statement that communication is not the two-edged sword of "reductionism versus ratiocination." Communication is, instead, the duality which offsets linear logics with spatial emotions. It may be believed that spatial patterns are passively manipulated through holistic-emergent patterns, and then offered to the lexical mental organization to receive more active pronouncements of utilization. In this way an exegesis has been already performed which is foreign to the dominating lexical order of thought. It does, in fact, receive these spatial patterns as offerings of completed wholes to be taken consciously and used analytically in semiosis.

Once all this is said, it becomes possible to believe that purely logical types are not all that interested in space, and that wholistic types seldom become excited by the niceties of propositional thinking. And whatever else such pronouncements may portend they relate most directly to an interpretation of experience which places something like a science of deductive logic at one extreme, and the experience of architectural space at another, and any communication between these two natural antagonists must rely upon the promise of something like a semiosis, which, in its neutrality, recognizes the diversity of both extremes.

6. Musement on the Whole

The argument is an old one, and has taken many turns since the Greeks framed it as the dualism -- the middle ground caught between the many elements of pluralism and the single

reduction of monism. It is an old argument which in this century has received considerable reinforcing with the new experiments in EEG, and which now enjoins direct relationships between logics and architecture through semiotics.

In this paper the argument has been framed as the unequal contest between linguistic-sequential mental organizations of the left cerebral hemisphere, and their right side counterpart of holistic-emergent mentalities. Until now, semiotics, through either Peircean or Saussurean models, have entirely sided with the former and ignored the latter, and if that continues, there can be no hope of achieving Morris' promise of using semiosis to promote the understanding of all things.

That so much is actually possible may come as a surprise to some ardent semioticians. That its promise is impossible without a regimen which accounts for spatial (as well as linear) communications, may seem unbelievable to most. Insofar as semiotics remains trapped in a linear discursive mode of sign interpretation, it will remain as Gamow's two dimensional man, who lives in the surface of a sheet of paper. To him "space" is the distance between points. And even if he becomes able to conceive of "space" in the Cartesian model, it will still be merely a concept subtracted from the synthetic accumulation of three individual planes.

A holistic creature, on the contrary, with his emergent mental organization doesn't substitute planer abstractions for the experience of space, for he knows space absolutely; he wallows in space as though it were a part of his existence. But, for these entirely non-intellectual experiences, he must pay the price. The holistic creature enjoys a sort of backward problem-solving ability but it is one bereft of true rationality and immune to the fine tuning of sylogistic propositions. And further, his mentality is incapable of conceiving of anything, for instance, as the abstraction called "function." That intellectual conception is a logical formulation, used as a substitute for change or displacement, usually with a utile signification. "Function" often is measured through the distance in which displacement (or change) operates, its value being then quantifiable with the addition of another measurable change, such as mass, amount, or duration. That sort of concept is foreign to holistic mentalities, as are all linear-temporal concoctions of analytics.

So much is at once the difficulty and the necessity for semiotics. The very fact that the communication of information about something referred to as a holistic-emergent mental process takes place through use of an opposing linguistic process, totally foreign and at odds with that which is charged to explain, can be seen to be a monumental difficulty. The necessity for enjoining that difficulty lies in two areas: the one of the mandate for semiotics to become a general theory of signs, thus comprehensive and unbiased; the other of the need for architecture to receive a basis for theory which does not impede creativity, yet displays a structural content supportive of systems of space.

In order that any of this monumental cooperation be accomplished, both regimens must concede a greater reality than they have so far submitted. Syntactics must concede, for example, that under the Peircean model, there is no adequate sign vehicle for a greater amount of our total experiences than that for which semiosis becomes adequate expression. And architecture must submit that it has exhibited a poor realization of that with which it is charged, as Keeper of Space.

Both regimens in fact, resist conceding the existence of space, because space itself remains ineffable to linguistic structures. And rather than declare this impasse to be simply an admission of a "horror vacui", it is more advantageous to realize, rather than ignore, the normal, basic stricture between that which has been "sign" and that which is pure experience. The Peircean model reduces aesthetic experience (i.e. of space) to an icon of logical proportions, and thus ignores the "object" of spatial existence (which is not really an object at all) in favor of a discursive object. It is an act prejudicial for logics and against holistics.

By recognizing that which this experiment has measured, both semiotics and architecture may, if they so choose, recommend that semiosis represent a Peircean double image phenomenon (not the traditional single object), and thereby absorb a whole, new world of experience as being available to the study of communication. Particularly, semiotics may accept a mediating role as generalizer of both positions, and through filtering the inevitable conflict of dual existences, actually consummate that energy for theory which it has only so recently generated in architecture. It may do all of this by the recognition of the dual images perceived

as logical versus holistic.

At the risk of boring repetition, it must be again allowed that the caveat of the object be heeded. Idolotrous attention paid to the Object of Aesthetics can only obviate the experience of space, so necessary to architecture and so essential to the "knowing" holistic image. Peirce's own admonition is perhaps the best expression of that peculiar process which logics is forbidden to know:

Because it involves no purpose save that of casting aside all serious purpose, I have sometimes been half-inclined to call it reverie with some qualification; but for a frame of mind so antipodal to vacancy and dreaminess, such a designation would be too excruciating a misfit. In fact, it is Pure Play. Now, Play, we all know is a lively exercise of one's powers. Pure Play has no rules, except this very law of liberty. It bloweth where it listeth. It has no purpose, unless recreation. The particular occupation I mean -- a petite bouchee with the Universes -- may take either the form of aesthetic contemplation, or that of distant castle-building (whether in Spain or within one's own moral training), or that of considering some wonder in one of the Universes, of some connection between two of the three, with speculation concerning its cause. It is this last kind -- I will call it 'Musement' on the whole -- that I particularly recommend."⁴

NOTES

1. "Signification and Significance," 1964, p. 1.
2. Hartshorne, C., and Weiss, P., eds., "Collected Papers of Charles Sanders Peirce," Vol. 2, 1931-1935, Cambridge, paragraph 197.
3. Op. Cit. Hartshorne, Vol. 6, paragraphs 505-507.
4. Op. Cit. Hartshorne, Vol. 6, paragraph 458, and Feibleman p. 424.

X. PEIRCE SPECIAL SESSION

MATHEMATICS AS A SEMIOTIC FACTOR IN THE THOUGHT OF C. S.

PEIRCE

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I continue to live with the nagging conviction that a thorough understanding of any aspect of Peirce's tightly integrated thought can be attained only through an appreciation of the structure of the underlying mathematical framework on which that thought is built. Mathematics is a subject in closest alliance with semiotics, and Peirce has been a celebrated figure in this recently emerging academic discipline. It is natural, then, to examine the mathematical character of his thought in general and its effect on the nature of his semiotical procedure in particular.

In the celebration of Peirce as a philosopher and logician seldom is mention made of his thirty-one year career (1859-1891) in the service of the United States Coast and Geodetic Survey where he acquired an international reputation as geodesist and astronomer. Even less seldom is there any reference to his life-long exposure to the theoretical and applied forms of mathematics that were acquiring a new relevance in the mathematical and scientific revolution of the late 19th century. And yet he once wrote that his special business was to bring mathematical exactitude, and he meant modern mathematical exactitude into philosophy and to apply modern ideas of mathematics in philosophy. (NEM 4;x). Moreover, "Philosophy requires exact thought, and all exact thought is mathematical thought." It must be bound down to a logic at least as rigid as that of Euclid, he claimed. Peirce believed that his own thought was so characterized, since he had been bred "in the lap of the exact sciences" and if he knew what mathematical exactitude is, "that is as far as he could see the character of" his philosophical

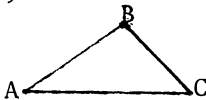
reasoning. (MS 438) To examine this mathematical exactitude we shall turn to the methodology of the logic "at least as rigid as that of Euclid." Indeed we shall even stop to examine the pattern of treatment of a theorem in Euclid.

A basic assumption of this paper is that a mathematician by the very nature of his operations with a symbolic language devoid of any extraneous overtones is a practitioner of semiotic although he doesn't consciously sail under that flag. In his "search for a method" Peirce naturally adapted the symbolism and operational techniques of algebra to problems in logic. And his success in further developing the symbolic logic of Boole and De Morgan was well recognized in his time. But I turn here to the prescription given by Peirce for a valid procedure in logically examining the validity of a suspected "truth," like that of a theorem in geometry. He outlined the procedure as follows:

- (1) Construct in the imagination or on paper a diagram the relation of whose parts is completely determined by the premisses.
- (2) Experiment upon the effects of modifying this diagram.
- (3) Observe in the result of this experiment certain relations between its parts ever and above those which sufficed to determine its construction.
- (4) Be satisfied by inductive reasoning that these new relationships would always subsist where those in the premisses existed.

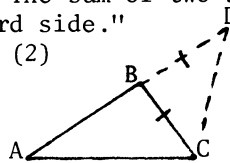
Let us now follow his instructions in proving the validity of the euclidian theorem, "The sum of two sides of a triangle is greater than the third side."

(1)



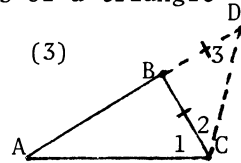
Construct an icon of the given parts.

(2)



One of many possible modifications is to extend AB to D so that $BD = BC$. Draw the line CD.

(3)



Label the angles 1,2,3 and note the new relations:
 $\cancel{2} = \cancel{3}$
 $\cancel{1} + \cancel{2} > \cancel{3}$
 Therefore $AD > AC$
 $AB + BD > AC, AB + BC > AC$
 Q.E.D.

The statements in the (3) column are valid by axioms, definitions, and previously proved theorems.

In step (2) innumerable different modifications might have been made to find one at least that would bring in its wake effects that lead quickly to a new set of fruitful relations and hence to the desired conclusion. The one given here has become standard in the many editions of Euclid's Geometry during the past 2000 years. But in his popular edition of this work (first ed. 1908), Sir Thomas Heath exhibited several equally valid proofs with other sets of effects due to the differing diagram modifications. An immensely large community of scholars has been demonstrating the proof of this theorem over the ages and will undoubtedly do so into the infinite future. The inductive 4th step is thus guaranteed by the unceasing activity of successive generations. The method employed in the illustration above was called Theorematic Reasoning by Peirce for obvious reasons. He did not limit this procedure to problems in mathematics but made it the basis of investigation into truths in every avenue of research - science, philosophy, logic, history.

Peirce's scientific methodology conforms to the above. The terminology there, however, is that of his general theory of reasoning. A generalizing statement is proposed to explain the mass of accumulated facts. The inference so drawn is called an "abduction." It corresponds to the mathematician's first step, the enunciation of the theorem. Abduction having suggested a theory, one proceeds "to deduce from that ideal theory a promiscuous variety of consequences to the effect that if we perform certain acts, we shall find ourselves confronted with certain experiences." The introduction of the extraneous line, for example, in the mathematical illustration, presents the investigator with angular equations and inequalities. "We then proceed to try these experiments, and if the predictions of the theory are verified, we have a proportionate confidence that the experiments that remain to be tried will confirm the theory." (CP 8.209) The reasoning involved in these experimental trials Peirce called "induction." The Heath reference given above serves as the mathematical analogue. Peirce called the inferences of abduction, deduction, and induction the elementary modes of reasoning and combined as they are above, he created a kind of semiotic machine.

It is of great interest to find him using this semiotic machine in the resolution of questions in ancient history and

in the history of science especially where evidence is found in ancient manuscripts or inscribed on monuments. He applied it in testing the authenticity of the writings of Aristotle, the chronology of Plato, the life of Pythagoras, and the origin of the Companus edition of Euclid, a copy of which is in the Columbia University Library. He used it in the analysis of the records of Kepler, of Galileo, of Petrus Peregrinus. Peirce knew of the archaeological diggings in the Middle East and wrote critically on the language and customs of ancient Egypt. He noted that "comparing the teachings of the history of science on the one hand, and those of logic on the other, we notice a certain agreement between the two. The interesting phenomenon which gives the first impulse to scientific thought corresponds with that interesting colligation of facts which is the first step of the inferential procedure. Experimental analysis plays a great part in both." (CP 7.277)

Besides prescribing the process of establishing "truth" diagrammatic representation serves as a semiotic tool in the exposition of Peirce's thought lending itself to a graphic methodology in logical analysis. Many scholars have noted by this time the way in which his Existential Graphs, his chef d'oeuvre, geometrically represents the step by step play of his logical thought. But no attempt has yet been made to associate the Graphs with any particular mathematical advance of the end of the century. He wrote that "If symbolic logic be defined as logic...treated by means of a special system of symbols, either devised for the purpose or extended to logic from other uses, it will be convenient not to confine the symbols used to algebraic symbols, but to include some graphical symbols as well" (CP 4.372) And that is precisely what he had done.

In his earliest work in this area Peirce had borrowed "spots" and "lines" "in imitation of the chemical diagrams showing the constitution of compounds". (CP 3.468) These "entitative graphs" were superseded by schemata that suggest the mathematically sophisticated thought of Bernard Riemann, greatly admired by Peirce, and one whose thought was in the tool-kit of Einstein and the theory of relativity. Riemann wrote of connectivity, and cross-cuts and the tacking of sheets at branch points. Peirce is led to write of having in place of a simple sheet of assertion, "a book of separate sheets, tacked together at points, if not otherwise connected. For our alpha sheet, as a whole, represents simply a universe

of existent individuals, and the different parts of the sheet represent facts or true assertions made concerning that universe. At the cuts we cross into other areas, areas of conceived propositions which are not realized. In these areas there may be cuts where we pass into worlds which, in the imaginary worlds of the outer cuts, are themselves represented to be imaginary and false, but which may, for all that, be true, and therefore continuous with the sheet of assertion itself, although this is uncertain." (CP 4.512) Peirce later extended this idea to an "improvement" which he never completed. He now "tinted" the sheets differently on both sides. "The recto is appropriated to the representation of existential, or actual, facts, or what we choose to make believe are such. The verso is appropriated to the representation of possibilities of different kinds...." (CP 4.573) Several paragraphs later he writes that "the cut may be imagined to extend down to one or another depth into the paper, so that the overturning of the piece cut out may expose one stratum or another, these being distinguished by their tints; the different tints representing different kinds of possibility." (CP 4.578) Riemann had created his Riemannian surface to represent the character of multiple-valued analytic functions. The association of the two sets of ideas is obvious. Peirce's boundless but limited non-euclidean line of rationality, the line that returns into itself, and useful in other areas of his thought, is similarly an illustration of the powerful influence of Riemannian devices in Peirce's methodology.

In general the "New Math" of the second half of the nineteenth century had a great impact on Peirce's later writings. He was well aware of the then current developments in mathematical thought and one day the writer hopes to produce the full evidence which she has already started to accumulate over a long period of time bit by bit as in this paper. With the four volumes (5 books) of Peirce's New Elements of Mathematics available in printed form for only the past five years, it is obvious that a vast research opportunity is at hand for those with the appropriate mathematical background and interest to pursue the detail. Semiotic rewards would be great indeed.

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AN OUTLINE OF THE FOUNDATIONS OF MODERN SEMIOTIC:

CHARLES PEIRCE AND CHARLES MORRIS

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Contemporary semiotic has been greatly influenced by the philosophy of Charles Morris. Morris undertook to synthesize some of the principal philosophical movements of his time in a new "science of science" based upon the study of scientific method as a sign system. The branches of this metascience were to be "syntactics," "semantics," and "pragmatics;" or the study of science as a language, as a knowledge of objects, and as a type of activity. The first two of these branches were drawn from the interests of the logical positivists and the third from the pragmatists.

Morris acknowledged that pragmatism might appear to be incompatible with logical empiricism, but he argued that an adequate understanding of science must take account of "the psychological, methodological, and sociological aspects of scientific practice" (Morris, 1938a:72). However, Morris himself did not successfully reconcile nor even fully grasp the profound differences in point of view between logical positivism and pragmatism, differences that go to the very roots of modern semiotic. The result is that his work has tended to obscure rather than to clarify certain fundamental assumptions of contemporary semiotic. A thorough reexamination of the foundations of modern semiotic with especially careful attention to the arguments of the pragmatists is now required. As a contribution to this reexamination we propose to contrast the lines of thought underlying Peirce's semiotic philosophy with Morris's own semiotic.

Peirce lays the foundations of his semiotic in a series of articles that appeared in the Journal of Speculative

Philosophy in 1868. The theme of these articles is the inadequacy of the Cartesian account of science. The alternative that takes shape in Peirce's criticisms, although not yet named, is semiotic.

Peirce summarizes his objections to Cartesianism in these four points:

1. We have no power of Introspection, but all knowledge of the internal world is derived by hypothetical reasoning from our knowledge of external facts.
2. We have no power of Intuition, but every cognition is determined logically by previous cognitions.
3. We have no power of thinking without signs.
4. We have no conception of the absolutely incognizable. (Peirce, 5.265.)

Let us take the second point first. Descartes begins with skepticism, claiming that no science can be secure until its foundations are established beyond all possibility of doubt. He observes that contemporary science is not so founded. To remedy this he proposes to doubt everything until some new principle proves itself to be indubitable and thereby provides the basis for a new, secure, and genuine science.

Peirce's denial that we have the power of intuition is a denial of the Cartesian skepticism. By "intuition" Peirce means a cognition completely undetermined by any prior cognition, or what amounts to nearly the same thing, a premiss that is not itself a conclusion, an absolutely first premiss.

Descartes offered his philosophy as an alternative to scholastic logic. The schoolman's picture of science was one of a chain of syllogisms, the first premiss of any one of which was justified as the conclusion of still prior syllogisms, and so on. At the very beginning of this chain of syllogisms stood the unconditioned first premisses of all scholastic science: divine revelations and the testimonies of authorities. Descartes' innovation consisted in attempting to replace authority with reason. He undertook to found science upon a principle that would rationally justify itself and therefore stand as more than a tenet of faith.

Peirce's alternative to both scholasticism and Cartesianism is that inquiry always takes place against a background of premisses taken on faith. These premisses are not infallible, for inquiry might eventually reveal them to be false. But nevertheless, every inquiry is conditioned by certain preconceptions that it does not even occur to us to doubt. In the course of our inquiries we either come to revise our original premisses or we do not. If we do revise them, these new opinions function as the premisses of our continued investigations until we are forced, in turn, to revise them, and so on. If at some point we achieve opinions that we would never be forced to revise, then we have reached the goal of our inquiry, the truth of the matter. For truth is just that opinion that no course of investigation, no matter how prolonged, would ever lead us to revise. Science, thus, is a process of self-correcting inquiry. It is the capacity of inquiry to correct itself, rather than the infallibility of fundamental premisses, which guarantees the validity of science.

Peirce's first objection to Cartesianism is to the claim that we have a power of introspection. Descartes had argued that science must be founded upon intuition, premisses that justify themselves. But the only self-justifying premiss that Descartes could discover was, "I think, therefore I am." Thus Descartes concluded that science ultimately must rely upon intuitive self-consciousness, that is, upon introspection. But Peirce objects that,

...to make single individuals absolute judges of truth is most pernicious...We individually cannot reasonably hope to attain the ultimate philosophy which we pursue; we can only seek it therefore for the community of philosophers. (Peirce, 5.265.)

Just as an opinion of the moment always must be subject to revision in the course of future inquiry, so any individual opinion must be subject to the criticism of the community, and not only a particular community, but the community at large, unbounded in time or place. Scientific objectivity as Peirce conceives it is not the result of a single mind's successful apprehension of an object otherwise out of consciousness, but the product of the continuous scrutiny of preconceptions by the scientific community. Whatever conception the community would agree upon in the long run is the truth; and its object is real.

Peirce takes up the question of the relation of objects to consciousness in his fourth objection to Cartesianism, that the absolutely incognizable is absolutely inconceivable. He remarks:

That upon Cartesian principles the very realities of things can never be known in the least, most competent persons must long ago have been convinced. (Peirce, 5.310).

Peirce evidently has in mind the whole dialectic of modern philosophy that culminated in Kant's explicit recognition that the thing-in-itself cannot properly be known to science. That dialectic can be said to have begun with modern philosophy's rejection of scholastic realism in favor of nominalism. From this point of view the logic underlying the development of Cartesian philosophy can be summarized this way:

- Only particulars are real. Universals are mere inventions of the mind.
- Nevertheless it must be admitted that universality is an ineluctable aspect of all scientific thought.
- Therefore science can grasp only its own inventions. It cannot lay hold of the real.

But on the other hand the Cartesian claims that if science is to be possible at all, we must have some power of immediately knowing particulars. Science is knowing things as they really are, and things as they really are are particulars. Thus the Cartesian comes to insist that we have a conception of what is, properly speaking, incognizable.

Peirce replies that rather than hold fast to paradox the Cartesian had better re-examine his premisses, especially the nominalistic assumption that only particulars are real. According to Peirce science can only base itself on the recognition that some universals are real after all. The best argument for scholastic realism is that if it is not true, science is impossible.

The third of Peirce's objections to Cartesianism is the one that opens the door of semiotic: "All thought is of the nature of a sign." From Descartes' own point of view the

great problem is how the substances, res cogitans and res extensa, soul and body, can have anything to do with each other. Peirce suggests that this problem is the logical consequence of Cartesian assumptions about the nature of science. Descartes first assumes immediate self-consciousness. We are supposed to know ourselves not through hypothetical reasoning from known facts, but by virtue of a special faculty. In the second place Descartes supposes that the object as it really is, is completely unrelated to mind. Thus it can only be known by means of an "intuition," or cognition completely undetermined by any prior cognition. The inevitable conclusion from these premisses is that we have no grounds for supposing that self-consciousness is in any way related to objects at all. We appear to be locked into our own consciousness. The Kantian philosophy simply acknowledges that science can never know things-in-themselves and proceeds to try to salvage the objective validity of science by other means.

Peirce's position is more radical. In broad outline it is that science does not consist in bringing together substances supposed to be immediate. It is rather a continuous process from which certain elements may be prescinded, but which nevertheless always manifests a mediated unity. Thus the Cartesian question becomes not one of how to synthesize the immediate, but one of how to analyze the mediate. Only when the underlying assumptions of Cartesianism are reformed can we understand how science can know the real world.

The key to the solution is Peirce's understanding of mediation. There is mediation when a first is to a second by means of a medium, or third. An unbounded complex of mediums is a continuum. In Peirce's view science, by which he of course means not merely laboratories and test tubes but reason in the classical sense as well, is a great continuum in which each inquirer, and indeed in which each idea, stands to others through the medium of continued inquiry.

Another way of saying this is that all thought is of the nature of a sign; for by definition a sign is the medium through which one thing is represented to something else, which sign itself may be represented then to other things by means of further signs and so on. Inquiry is this continuing process of sign interpreting sign. From this point of view Peirce's criticism is that the Cartesian philosophy, instead of recognizing that the sign process itself is

fundamental, makes inquiry depend upon elements which by their very nature cannot themselves be the objects of inquiry, "in short (upon) something resulting from mediation not itself susceptible of mediation" (5.265). In contrast Peirce insists that all thought is an aspect of semiosis.

In Peirce's semiotic the unmediated substances of Cartesianism are transformed into "presciss" elements of the mediating sign process. Instead of a self of which we are conscious through a special power of introspection, a sign is said to have a ground. Like the Cartesian ego, the ground is immediate consciousness, abstracted from all relation. Unlike the Cartesian ego, however, the ground is not an object of immediate cognition. It is, rather, the element of immediate consciousness in the cognition of the object, "the thought itself, or at least what the thought is thought to be in subsequent thought." (5.286).

Similarly the object is like the Cartesian object, the other-than-self, but we do not know the object through immediate relation, but only through its representation in other thoughts. Finally the relation of ground and object is not immediately posited, but is rather represented to mind through a mediating representation, or interpretant. Indeed, "mind," as it is used here, is to be understood as nothing but semiosis, the continuing interpretation of interpretations.

Therefore all thought is in signs. Signs, and not intuition, are the very foundation of Peirce's semiotic. When we turn to Charles Morris a quite different view emerges.

Charles Morris first came to appreciate the importance of the philosophical issue of signs while a student of the pragmatist George Herbert Mead at the University of Chicago. But Morris also was influenced by the logical positivists, and especially by one of the leaders of the Vienna Circle, Rudolph Carnap. Morris's semiotic was an attempt to synthesize these two influences. In our view it failed because Morris was not fully aware of the differences between pragmatism and logical positivism (e.g., Morris, 1964:33; 1970:148). Specifically, Morris most fundamentally failed to grasp the full import of the fact that the Vienna circle had tried to found science upon "certain fundamental concepts" and "elementary experiences," and then to erect a

"constructional system" (see Carnap, 1967); whereas Peirce had sharply criticized the Cartesian assumption that science must be based on indubitable foundations. In contrast to the logical positivists, as well as to Descartes, Peirce's "foundation" was continuing inquiry. The result of Morris's attempted synthesis was a philosophy that combined the basic assumptions of logical positivism with a deceptive admixture of pragmatistic vocabulary. For example, like Peirce, Morris analyzes semiosis triadically (although his definition also introduces an obscure fourth "factor").

This process, in a tradition which goes back to the Greeks, has commonly been regarded as involving three (or four) factors: that which acts as a sign, that which the sign refers to, and that effect on some interpreter in virtue of which the thing in question is a sign to that interpreter. These three components in semiosis may be called, respectively, the sign vehicle, the designatum, and the interpretant; the interpreter may be included as a fourth factor. These terms make explicit the factors left undesignated in the common statement that a sign refers to something for someone. (Morris, 1938b:3).

The last statement, "...a sign refers to something for someone," which Morris implies is the vague language of the older tradition, is actually a paraphrase of one of Peirce's definitions of a sign: "...something which stands to someone for something in some respect or capacity..." (2.228). Morris suggests that this triadic definition of signs was common, but it was not. Signs were usually defined dyadically as something which stands for something else. Likewise the term "interpretant" is Peirce's. In the place of Peirce's first two elements of a sign, the ground and its object, stand Morris's terms sign vehicle and designatum. Morris defines the sign vehicle as "that which acts as a sign," while "that which the sign refers to," whether actual or not, is the designatum. Those designata that actually exist Morris terms denotata. The denotatum seems to correspond to what Peirce calls the dynamical object, and the designatum to the immediate object, although Peirce would claim that the sign object is an element prescinded from the sign process and therefore can only be known as it is represented to be in further signs, and not immediately. Concerning the sign vehicle Morris says:

In any specific case of semiosis the sign vehicle is, of course, a definite particular, a sinsign; its "universality," its being a legisign, consists only in the fact, stutable in the metalanguage, that it is one member of a class of objects capable of performing the same sign function. (Morris, 1938b:50).

Here is one of the basic differences between Morris's and Peirce's theories of signs. For Peirce, the "ground" element of the "ground - object - interpretant" continuum is the immediate quality of self-consciousness in the sign. The object (or designatum - denotatum) is the relative other in the sign, and would correspond roughly, in Morris's usage, to sinsign. But Peirce's qualisign - sinsign - legisign distinction belongs in a systematic science of semiotic in which a sign is related to its own ground or inherent quality through quality (qualisign), existence (sinsign), or law (legisign). Another way of saying this is that it is quality which makes a sign a qualisign, sinsign, or legisign, and that in the latter two cases it is a quality of existence and a quality of law which constitute a sinsign and legisign respectively. But in Morris's logical positivistic view there is no quality, positive possibility, or vagueness. For Morris there are only universals and particulars, and "universals" belong only to the metalanguage (Morris, 1938b: 50,51). Thus Morris's position is directly opposed to Peirce's. The point of the pragmatists is that generality is real, and that even "thing-language," as opposed to metalanguage, must make use of "universals," because the object of a sign is not given apart from semiosis, but only in and through semiosis. For the pragmatists there are, strictly speaking, no "things" in Morris's sense at all, i.e., no designata that are not signs, for we have no power of intuition. In other words Morris fails to understand that pragmatism is a renovated scholastic realism. He remains a nominalist.

Morris also borrowed Peirce's trichotomy of icon, index, and symbol:

In general, an indexical sign designates what it directs attention to. An indexical sign does not characterize what it denotes...and need not be similar to what it denotes. A characterizing sign characterizes that which it can denote. Such a sign may do this by exhibiting in itself the properties an object must have

to be denoted by it, and in this case the characterizing sign is an icon; if this is not so, the characterizing sign may be called a symbol...A "concept" may be regarded as a semantical rule for determining the use of characterizing signs. (Morris, 1938b:24).

Morris's use of "indexical sign" retains Peirce's emphasis on denotation through immediate factual relation of sign and object, in which the object compels the interpretation, but once again Morris's use of the term throughout the text betrays his nominalistic assumptions that denotation lies outside the sign process and that meaning depends upon intuition rather than semiosis. This is in sharp contrast to Peirce's view that, although denotation is an aspect of all signification, sign and object are not immediately given entities but abstract elements of a sign continuum.

Morris's definition of icon also seems to represent Peirce's notion that an icon signifies its object by virtue of a common quality. Yet Morris's nominalism does not allow for qualitative possibility, which is the mode of relation of an icon to its object in Peirce's scheme (Peirce, 2.276f). Morris's substitution of "properties" ("exhibiting in itself the properties an object must have to be denoted by it") makes an icon signify through imputed character, in Morris's term, "values," rather than through shared quality (Morris, 1946:81; 1964:70f), and thus misses the point of Peirce's theory of icons. In a later elaboration of his foundation of signs monograph, Signs, Language, and Behavior, Morris stated:

A portrait of a person is to a considerable extent iconic, but is not completely so since the painted canvas does not have the texture of the skin, or the capacities for speech and motion, which the person portrayed has. The motion picture is more iconic, but again not completely so. (Morris, 1946:23).

Morris fails to appreciate Peirce's crucial transformation of Descartes' concept of immediate self-consciousness into qualitative immediacy. Consequently Morris distorts the icon, making it into a conventional sign of a peculiar nature rather than a properly qualitative sign. The notion of a "pure" icon becomes the notion of an exact physical duplicate, a clone. An object of visual art, which in Peirce's view would communicate by virtue of inherent quality, must, in Morris's view, reprod-

uce itself in the viewer quite literally. A "pure" iconic representation therefore would not be representative at all. Iconicity becomes mere duplicity.

Peirce also remarks that a portrait may be regarded as an icon, saying that an icon:

...is a Sign whose significant virtue is due simply to its Quality...We say that the portrait of a person we have not seen is convincing. So far as, on the ground merely of what I see in it, I am led to form an idea of the person it represents, it is an Icon. (Peirce, 2.92).

And Peirce, like Morris, also recognizes that a portrait may not be a pure icon. However, his reasons for saying so are completely different from those that Morris gives. Peirce observes that we are influenced by knowing that the portrait is an effect, through the artist, of the original's appearance, and so may be interpreted as an indexical sign, and not only as an icon. Also, we may be influenced by knowing that portraits, "have but the slightest resemblance to their originals, except in certain conventional respects, and after a conventional scale of values, etc." (2.92), and so may be interpreted as symbols rather than as icons. The "pure" icon is thus by no means merely a sign having an absolutely determinate resemblance to its object. Instead it is a sign that signifies through internal quality, rather than actual relation or conventional representation.

Morris's definition of the elements of a sign is ambiguous on the "interpretant - interpreter" relationship. He says that the common view of semiosis is that it involves three factors; but he equivocates, or four," in parentheses. He adds that, "These three components," may be called the sign vehicle, the designatum, and the interpretant, but after the semicolon he hedges, "the interpreter may be added as a fourth factor" (Morris, 1938b:3). This ambiguity suggests that Morris set out from Peirce's tripart conception of signs, but, failing to understand that for Peirce man himself is a kind of sign, introduced a fourth term, the interpreter, which to him seemed clearer and more concrete than "interpretant." This view finds some confirmation in the fact that Morris disregards his own definition and substitutes his fourth component, the interpreter, for the third component, the interpretant, which drops out of account com-

pletely: "In terms of the three correlates (sign vehicle, designatum, interpreter) of the triadic relation of semiosis, a number of other dyadic relations may be abstracted for study" (Morris, 1938b:6). This sleight-of-hand brings him back to a triadic conception of the sign, but one in which the interpretant has disappeared. Upon this magic rest the foundations of what Morris dubbed "pragmatics." Again Morris's nominalism, his emphasis on a behavioral interpreter already given outside of the sign process rather than an interpretant within it, his tendency to regard "things" as real and thoughts as mere concepts, diminished the scope of Peirce's semiotic.

Perhaps the most influential contribution of Charles Morris to contemporary semiotic is his three-fold division of the science of signs into syntactics, semantics, and pragmatics. By comparing Morris's division with Peirce's division of semiotic into pure grammar, critical logic, and pure rhetoric, one can see both the basis of Morris's division and the radical departures his theory takes.

In a manuscript written in 1897 Peirce proposed the following breakdown of semiotic and gave these reasons for making it.

In consequence of every representamen being thus connected with three things, the ground, the object, and the interpretant, the science of semiotic has three branches. The first is called by Duns Scotus grammatica speculativa. We may term it pure grammar. It has for its task to ascertain what must be true of the representamen used by every scientific intelligence in order that they may embody any meaning. The second is logic proper. It is the science of what is quasi-necessarily true of the representamina of any scientific intelligence in order that they may hold good of any object, that is, may be true. Or say, logic proper is the formal science of the conditions of the truth of representations. The third, in imitation of Kant's fashion of preserving old associations of words in finding nomenclature for new conceptions, I call pure rhetoric. Its task is to ascertain the laws by which in every scientific intelligence one sign gives birth to another, and especially one thought brings forth another. (Peirce, 2.229).

On the surface, it appears that pure grammar must correspond to Morris's syntactics, critical logic to Morris's semantics, and pure rhetoric to Morris's pragmatics. But a closer examination reveals that at every level Morris's nominalism creates a systematic inversion of Peirce's divisions.

Pure grammar, as that branch of semiotic which seeks to state the conditions under which a sign may have meaning, culminates in pragmatism, as the doctrine that attempts to **explain** how our ideas may be made clear. Because pragmatism is in the first branch of Peirce's semiotic, it would appear to be closer to Morris's syntactics than to his pragmatics. But the content of even these two sciences is radically different. In treating the "formal relations of signs to one another" Morris seems to be suggesting something akin to certain aspects of linguistics, which in Peirce's view is a psychognostical science rather than a branch of general semiotic. For Morris,

Syntactics is, then, the consideration of signs and sign combinations in so far as they are subject to syntactical rules. It is not interested in the individual properties of the sign vehicle or in any of their relations except syntactical ones, i.e., relations determined by syntactical rules. (Morris, 1938b:14).

Critical logic, or Peirce's science of what must be the nature of signs if they are to represent their objects truly, seems to correspond to Morris's semantics. But upon closer inspection it can be seen that there are crucial differences between the Peircean conditions for truth and Morris's logical positivistic truth criteria. In Morris's semantics the object designated by the sign is not part of the sign process, but a "thing, which, in imitation of Carnap, may be represented in a 'thing sentence'": "...Let us use the term 'thing sentence,' to designate any sentence whose designatum does not include signs..." (1938b:15). Truth is thus based on intuition rather than semiosis. The insistence that science must be founded upon unquestionable objective knowledge, direct apprehension of "things," led Morris and the logical positivists to the same subjectivism for which Peirce had criticized Cartesianism.

The third branch of semiotic in Peirce's philosophy is, "the doctrine of the general conditions of the reference of

Symbols and other Signs to the Interpretants which they aim to determine..." (2.93). Pure rhetoric is no mere "rhetorical device" in Peirce's scheme, not persuasion for the sake of persuasion, but persuasion as determined by the real. It is concerned with inductive validity, i.e., what makes a conclusion valid. Pure rhetoric is not in the least concerned with who is doing the interpreting, but only that the interpreting signs (interpretants) would be valid. One can see how Morris, who substituted "interpreter" for Peirce's "interpretant" in an attempt to be more objective, could also "correct" Peirce's idea of the references of signs to their interpretants, with a division of semiotic (pragmatics) concerned with "the relation of signs to their users," or as he later reformulated it, with "the origins, uses, and effects of signs within the behavior in which they occur" (Morris, 1946:219). One also can see why this move is ultimately subjectivistic, because it has reference to particular individuals rather than to a normative conception of an unbounded community of inquirers. Morris reserves the issue of the objective truth of signs for the semantic level, while trying to account for the perspective of the sign "user" at the level of pragmatics. One can sympathize with the attempt to deal with the level of the "agent," but in defining the user as an individual organism instead of a fully socialized being existing in an objective web of goal-oriented signs, he moves far afield from pragmatism.

Morris's use of the term "pragmatics" in fact has little to do with what Peirce meant by pragmatism. Peirce's pragmatism would be in the first branch of semiotic, not the third, as mentioned. But more generally Morris does great violence to pragmatism by virtually defining "pragmatics" as expediency, viz., the relation of signs to their users, "within the behavior in which they occur," regardless of the norms of continuing inquiry. For Peirce, the "final interpretant," is not embodied in particular instances of behavior, but is general, self-correcting habit, the fruition of semiosis, the growth of "concrete reasonableness":

The deliberately formed, self-analyzing habit --self-analyzing because formed by the aid of analysis of the exercises that nourished it -- is the living definition, the veritable and final logical interpretant. (Peirce, 5.491).

Despite the important differences between the pragmatisms

of Peirce, James, Dewey, and Mead, the major American pragmatists were united in their opposition to the subjectivism that had been the heritage of the Cartesian philosophy. But in attempting to synthesize pragmatism and the nominalistic theories of logical positivism, Morris re-introduced the old Cartesian subjectivism in "pragmatics."

To a great extent semiotic owes its current foundations to the magic of positivism, which, in positing that the true objects of knowledge lie outside signs and knowledge, that the firm foundation for all cognition and reason in incognizable and irrational, created one of the most extreme metaphysics ever devised, a perspective that in our view would ultimately destroy the science of signs. If we are to regain a consistent theory of signs, whether it is based on the work of Peirce, Morris, Saussure, Wittgenstein, or others, we need to develop a deep understanding of the traditions of semiotic, so that the theory and its various terms can become instruments for inquiry, rather than means of mystification.

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XI. SEMIOTICS OF CULTURE

A COMPARATIVE STUDY OF SELECTED SEMIOTIC ELEMENTS OF
DIFFERENT BRANCHES OF FORTUNE-TELLING*

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This paper represents part of an ongoing synchronic study of the unique function language, sign systems and ceremony play in the dyadic encounter between a fortune-teller and his client.¹ We have found that fortune-telling can best be described as an interface of selected elements of persuasive and dyadic communication within the framework of visual, discourse and social semiotic systems. In this particular paper we will compare various visual and textual semiotic aspects of some of the various branches of fortune-telling (card, coffee and palm reading) from the specific point of view of the ceremony, sign systems and plot building involved in the fortune-teller--client dyadic encounter.²

Each branch of fortune-telling represents a semiotic system. However, cartomancy or taromancy, coffee reading and chiromancy differ in the specific semiotic systems of the signs and the ceremony associated with them:

Cartomancy (or taromancy) is traditionally defined as a branch of divination based on the symbolic meanings attached to the individual cards of a tarot or modern deck of playing cards which are interpreted according to the subject or

purpose of a reading and modified by their position and relation to each other, i.e., from their specific location in a "layout" or "spread." Cartomancy is used for personal divination, advice and a study of personality characteristics and events linked to the past, present and future. (Martin 1979:31). It has been viewed as a simple semiotic system in which each card represents a sign composed of a symbol or form i.e., the picture or number of the suit (Lekomceva and Uspenski 1962, 1977). These Russian semioticians distinguished the layout of the cards as a mechanism for generating sentences, viewing the cards as a lexicon. They even went further and compared the language of cartomancy to natural languages concluding that it was most similar to a finite-state grammar with a restricted semantics and simple syntax, typologically comparing it to an isolating language. The various discourse semiotic elements of cartomancy based on a simple syntax and plot building were discussed by Egorov (1964, 1977) and the discourse- plot- game- like elements of taromancy were explained in Corti (1973). We, on the other hand, believe that cartomancy and taromancy represent a complex semiotic system where the meaning part of the card symbol functioning as a sign, is oftentimes an index of exhaustive, graded and sometimes polysemic and even polaric meanings. The semiotic system of cartomancy also includes a broader semiotic of color since the color of the various suits adds to their meaning and interpretation (Aphek and Tobin 1981 b, c forthcoming b). These exhaustive, graded, polysemous or polaric meanings of individual cards revolve around a general rubric or theme and function in the specific frameworks of various layouts or spreads very similarly to the way individual lexical items, or various micro- or macro-textual elements, function within the framework of specific contexts within a larger discourse. The ceremony involved is partially influenced by the various layouts or spreads used, as well as whether the client participates in the reading by cutting or shuffling the deck or by actually placing the cards in the spread.

Palm reading (palmistry) has two aspects: (a) chiromony, which attempts to analyze a person's personality according to the shapes and lines of the palm and (b) chiromancy, which foretells the future of a person according to the lines of the hand. In palm reading, unlike the other branches of fortune-telling discussed in this paper, the signs are an integral i.e., a physical part of the client, taking the form of the lines, contours, shape, color, texture

and size of the wrist, palm, fingers and nails. There are different ceremonies and methods involved in the way the hand is presented to and studied by the palm reader which also affects the interpretation of the signs. The ceremonies may range from a simple rubbing or feeling of the palm with or without 'mechanical aids' such as paper clips, magnifying glasses, etc., to more elaborate ink or paint impressions of the palm (in black, gold or various colors) placed on various types of paper. The signs, however, have multiple meanings and may be considered as "umbrella terms" whose more specific interpretations are determined from a macro-textual or discourse point of view in combination with other signs.

In coffee or tea reading the signs are not iconically fixed, nor integral as in palmistry, but appear in the form of pictures or images, or fragments thereof, from the residue remaining in the cup. The reader chooses or fills in by a process of pars pro toto these pictures or images or fragments according to his imagination and will. The meanings attached to these pictures form a complex semiotic system where each meaning can be altered or modified by its position or place within the cup, its proportion and size, the frequency of its appearance, as well as its connection and juxtaposition or adjacency to other forms which may appear. The ceremony in coffee or tea reading may differ with regard to the participation or role played by the client, i.e., whether he merely drinks or actually reverses the position of the cup to create the signs which are then chosen and determined by the reader.

According to one of the methods of reading coffee or tea, the handle of the cup represents the client. Therefore, signs that appear in proximity to the handle represent events which are close to the client or his home and family and vice-versa. According to another method, the way in which the reader holds the cup will determine the temporal motif of the reading: all the signs appearing to the right will represent the future and those to the left, the past. According to another method, the cup is divided into three sections, the brim which represents the near future, the middle area which represents the distant future, while the bottom of the cup represents ill-fortune regardless of time. We would like to add, however, that in coffee reading in particular the client does not see the signs remaining in the cup held by the fortune-teller.

Although the actual semiotic systems of the signs and

the ceremony involved in each of the branches of fortune-telling we have outlined above may differ, there are certain linguistic, textual, discourse and social semiotic elements which they all share:

First, the dyadic encounter between a fortune-teller and client cannot be defined as what is usually termed in the discourse and linguistic literature as a conversation in either a formal or informal sense of the word, but is more similar to a monologue for several reasons: (a) the participants in this dyadic encounter, i.e., the fortune-teller and the client, have specific roles and have usually not met each other previously and have not (as yet) established a "relationship" of any kind. In this respect the encounter between them can be likened to the professional encounter between a client and a professional or expert (a doctor, psychologist, counsellor, etc.). (b) It is presupposed and expected that one party (the fortune-teller) will do most of the talking while the client will remain passive or answer certain questions, usually with a "yes" or "no," or provide certain basic information or verification about himself, or ask for further clarifications of what has been said. (c) The members of the fortune-teller--client dyad may not be seeking each other's approval, although the fortune-teller will be trying to establish credibility in the client's eyes, and possibly, but not necessarily, develop a longterm "professional relationship" with the client, once again, in a similar way to that of any professional or expert.⁵ All the above affect the verbal and non-verbal interaction between the fortune-teller and the client in general.

Secondly, this particular kind of "professional monologue-like communication" is heavily laced with elements of persuasive communication (Lee 1972, Hoveland et al 1957, Roloff and Miller 1980, Sandell 1977) whose goal is to influence people's behavior by appealing or influencing their reason as well as their emotions. Usually studies in persuasive communication deal with the language of advertising, salesmanship, political speeches and propaganda, describing both the rational as well as the emotional use of language. The persuasive element of the fortune-teller--client dyad uses selected aspects of persuasive communication on a one-to-one, face-to-face basis, as opposed to a one-to-many, oftentimes impersonal basis, generally found in the other branches of persuasive communication. Some of the basic elements of persuasive communication we have found relevant to the fortune-

teller--client discourse include: the order, arrangement, and presentation of themes, the means by which the fortune-teller attempts to establish credibility in the client's eyes, the use of frame or omnibus words, plain folk's device or "two-bit philosophy," as well as familiar rhetorical and prosodic devices such as metaphor, repetition, hesitation, dangling sentences, pauses and silence. In particular, we have found that the language of fortune-telling is not what is referred to in the semantic and linguistic literature as "vague" or "ambiguous," but rather represents a non-specific, non-precise omniscopus use of language which can be likened to the formularized language used for pre-prepared messages in telegrams or greeting cards which are applicable to a certain population in a given situation or set of situations.

The role of persuasive language in general and the particular manifestation of this kind of dyadic persuasive communication in particular has very fundamental visual, textual, and social semiotic implications:

First, the abovementioned linguistic and communication-oriented phenomena are manifested in both the micro- and macro- levels of language, i.e., on the levels of words, phrases, sentences, utterances or discourse. It includes utterances which exhaustively present a theme, (e.g., "you can either act, direct, produce or write a play"), or a range of possibilities, (e.g., "after it happened or will happen"), utterances which contain semantic or syntactic qualifiers, (e.g., "usually," "also," "either-or," or conditional phrases), utterances which contain frame words or omnibus words (e.g., "a certain problem," "a certain man," "someone," "something," etc.), utterances containing a "scale of relativity," (e.g., "you are getting better," "you should be more careful"), or utterances containing a general truth, (e.g., "criticism should be constructive," "haste makes waste").

Secondly, although the fortune-teller is doing most of the talking, both he and the client are building individual and independent plots (in conjunction with each other) during the fortune-teller--client session. These two parallel plots are based on two independent semiotic systems. The "external" plot, i.e., that of the fortune-teller, is based on two semiotic systems, the particular semiotic system of the signs and the ceremony of his particular branch of fortune-telling, as well as the semiotic system of language which is used to

build his text or plot based on the signs at his disposal. He is using these semiotic systems to create a broad context based on a generalized content through the use of emotional and persuasive language in a non-specific, non-precise omniscopus way. This, of course, makes supreme sense when we consider the fact that he has a rather lengthy monologue-like communication to maintain and is trying to establish credibility in the eyes of a specific client whom he has not previously met and who has come for personal advice and perhaps even divination with regard to his life and future.

If, as we have maintained, the fortune-teller is providing a generalized context and broad content in his external plot based on the semiotic system of his branch of fortune-telling, then the specific information sought by the client must be provided by the "internal" plot carried out independently, but in conjunction with, the fortune-teller's "external" plot. This "internal" plot woven by the client is based on the semiotic system of language alone, since the client is usually unaware, or is not knowledgeable of, the semiotic systems of the signs and possible intricacies of the ceremony attached to the specific branches of fortune-telling. The client is, therefore, performing an internal verbal or linguistic self-schemating processing wherein he is searching within his own experience, beliefs and memory in order to provide specific content information. He is thus becoming both the source and the destination of the message. An additional given is that both the fortune-teller and the client share certain social and moral values and beliefs which are part of their society and culture and which are manifested in the social aspects of the semiotic system (Halliday 1978) they are using in their individual plot building (Hendricks 1973).

It is not our claim that each of the elements we have discussed in the fortune-teller--client encounter, i.e., the language, the ceremony, the use of selected aspects of persuasive communication particularly the establishment of credibility within a certain visual, textual, parallel-plot-building discourse and social semiotic system within a dyadic framework is unique by itself and that no other parallels or similarities can be found in other types of communication. Our claim, however, is that the combination, the interface, of all of the above within the particular context of the fortune-teller--client encounter, i.e., the taking into account the expectations, attitudes, beliefs and pre-suppositions of the client (among other possible variables) is what makes

the particular interface of all the elements we have outlined above a unique conceptual communicative phenomenon worthy of study.

NOTES

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1. Our research (Aphek and Tobin 1981 a, b, c, forthcoming a, b, c) represents a study of Hebrew speaking fortune-tellers working in the State of Israel. We have seen, however, that many of our conclusions hold for English and Spanish data as well and we have begun to enlarge our study to include other languages.
2. We would like to point out that we have not been concerned at any point in our research, or in any of our published or unpublished material, with the question of the objective reliability or authenticity of the various branches of fortune-telling or the fortune-tellers themselves. Our research has focused on the investigation of aspects of the paralinguistic, linguistic, extralinguistic and semiotic elements of the interaction between fortune-tellers and their clients.
3. It is our contention that the language used in initial encounters between fortune-tellers and clients will differ from that used in meetings of the same fortune-teller and client if and when a longterm relationship may develop between them. It is our intention to continue our present study to include this question. We would also like to note that certain fortune-tellers, after they have completed their monologue may ask the client to talk about himself. The language of professional, particularly therapeutic, discourse has been discussed in Aphek, Bergman, Tobin (forthcoming), Labov and Fanshel (1977) Pittinger, Hockett, Danehy (1960), Watzlawick (1978) and Wodak (1981) among others.

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ICON AS INDEX: A THEORY OF MIDDLE BYZANTINE IMAGERY¹

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The Middle Byzantine period (843 A.D. to 1204 A.D.)^{1a} has been characterized by many scholars as a period of renaissance. The "classical tradition"² which purportedly flourished at this time, has been noted as a markedly persistent aspect of Byzantine art. This "tradition" of Byzantine classicism has been traced through the recurrence and proliferation of motifs, themes, figure types, and formal characteristics, defined a priori as classical.³ The concept of tradition is dependent upon a definition of history as continuous, a "background of permanence"⁴ against which appears the "new" as an act of the individual. The "classical tradition" in Byzantine art has thus assumed the function of an art-historical pedigree, linking the Byzantines to an illustrious past, while measuring their divergence from that past in formal and stylistic terms.

However, the Byzantines' attitude towards the antique was hardly uniform. Although the dependence of art historians upon the concept of tradition has implicitly suggested that pre-Christian ideas and forms were easily utilized by the Byzantines, the situation was apparently much more complex. It would seem that the Byzantine attitude towards antiquity was one of ambivalence and not simple acceptance or rejection. In his work on antique statuary, Cyril Mango⁵ has partially addressed this question by reviewing a number of texts which deal with attitudes towards antique statuary at various points in Byzantine history. These texts indicate that the prevalent belief concerning antique statuary throughout the Middle Byzantine period

was that the statues were inhabited by sinister spirits.

A story from the Life of St. Andrew the Fool, a ninth or tenth century text, should illustrate vividly the attitudes of the period. A woman in Constantinople attempted to curtail her husband's amorous wanderings with the aid of a magician. Shortly after the performance of certain rites she began to dream of being "pursued by Ethiopians and enormous black dogs."⁶ In her dreams she then imagined herself embracing the nude, antique statues in the Hippodrome, "urged by the impure desire of having intercourse with them,"⁷ As Mango's article indicates, this story is only one among many which point to a decidedly negative, or at least ambivalent attitude towards antique statuary. I would suggest that this attitude was related to the conflict between the desire on the part of the Byzantines to re-vitalize their heritage, and their desire to adhere to a religion which attempted to banish the lascivious, the erotic, the nude in the visual arts.

And yet the Byzantines were deeply concerned with the preservation of ancient Greek culture. One of the foundations of this preservation was the survival of the Hellenistic model of education. The imitation of specific styles, figures of speech, and similes was encouraged by this educational system.⁸ The "theory of imitation"⁹ was present in all aspects of Byzantine rhetorical writing. Even churchgoers took notes on certain sermons that they had attended, evidently with the intention of garnering appealing phrases for personal, future use.¹⁰

Quotations, allusions, and mythological classical motifs were employed for varying reasons. Certain authors referred to mythological or historical figures or episodes as models for contemporary personalities or events.¹¹ Often, however, quotations or allusions were a means of indicating one's acquaintance with the classics, and hence one's superior education.

An extensive familiarity with the classics aided in the development of the centos, poems which were composed entirely of quotations drawn from the writings of Homer.¹² These poems dealt primarily with non-Christian themes, although topics such as the Incarnation and the

Life of Jesus were occasionally attempted.¹³ On one level the meaning of these combinatory compositions was derived from the denotative language of the narrative. But each element within this narrative, each quotation, though separated from its original position in an Homeric text, still indicated its position in a specialized cultural code of Homeric quotations.

I have used the term "cultural code" because the educated Byzantine's acquaintance with classical Greek literature was ordinarily second-hand. In fact, it appears that the thought and writing of the Byzantines was to a large degree dependent upon such handbooks as the Anthology of Stobaeus, a compilation of immense scope.¹⁴ The eclecticism of these handbooks was in accordance with the Byzantine concept of education and philosophy. External philosophy was composed of the ancient Greek and pre-Christian writings. This type of philosophy was thought to have only a relative value. There was therefore no real need for the Byzantines to study such a work in its entirety. The compilers of the handbooks and the encyclopedists had provided, and continued to provide a ready-made code of quotations and allusions for the educated.

Why then did the Byzantines bother? Why did they create a closed code of quotations and allusions as a basis for the majority of their literary production? And why did the Byzantines imitate forms in the visual arts which seem to have evoked loathing and even fear (apart from sexual desire)? The impetus behind this preservation of classical elements in a well-defined code came from the aristocracy.

The aristocracy was created of two related components - the aristocracy of birth and the aristocracy of culture.¹⁵ The former was of increasing importance in the ninth and tenth centuries.¹⁶ Yet the sense of cultural superiority derived from the ability to speak and write in what was coded as classical Greek was essential to the aristocracy, especially the higher Byzantine aristocracy.

I would suggest that classical knowledge as a code of literary and visual allusions and quotations formed the basis for a social discourse which was

indexical in its practice. Literary practice constituted this discourse, as did the production of various art works, such as the numerous ivory caskets decorated with "classical" motifs, dating from the Middle Byzantine period. In order for one of these caskets to have been viewed as an object with significance, an active and well-educated "reader" was required--one who would be acquainted with not only the motifs and figures represented, but with the indexical process of signification as well. A reader would need not only a broad range of textual information, but also an understanding of how figures could be related to other figures on the casket, and how they could refer in a variety of ways to texts, events, or individuals which were not directly "quoted" on the casket. Most importantly, I would argue, a reader would need to be aware that the utilization of this code of classicism was "the Open Sesame to the highest and most lucrative employments in the bureaucracy, and even to the imperial cabinet and the imperial chamber."¹⁷

The concept of indexicality that I have alluded to here depends upon a specific definition of the term. Indexicality, attributable to both practice and object, refers to the conscious or unconscious utilization of an object by a subject so that the subject may assume a collectively-determined position in a social discourse. Indexicality is not inherent in an object, although the formal structure of an object may suggest such a usage to the subject.

The term therefore delineates a subject/object relationship which has as its goal the insertion of the subject in a role. Pierce's concept of the indexical sign is relevant here. The indexical sign brings us into connection with things.¹⁸ This process parallels the idea of an object being used in order to bring the subject into an already determined connection with a collective structure. This process is not a mirror of social relationships, but forms them, and is informed by them.

Employing this definition, it seems essential that we comprehend both literary and artistic production, and the ways of reading and seeing in Byzantium as indexical practices, composing a discourse inseparable from the issue of social status in a society. For it would seem

that the discourse that has been under discussion was a discourse of privilege: a discourse that indicated privilege through a playful positioning and repositioning of signifiers in a closed system.

This indexicality of practice and object, their function as indicators of position and privilege, is reminiscent of the spatialization inherent in the construction of the Imaginary, one of the three registers of experience defined by the work of Jacques Lacan. The term is derived from the word imago, referring to "the dimension of images, conscious or unconscious, perceived or imagined."¹⁹ Lacan's use of the term fixes the image as a part of reality, the Imaginary thus being primarily a visual and pre-Oedipal register, rather than that which is fantastic or fanciful in thought.

What one might term the nucleus of the Imaginary is the experience of the mirror-stage, so-called because it refers to the period at which a child first recognizes him or herself in a mirror. The mirror-stage is the moment of the child's movement towards a unified sense of self. Prior to this period, the child's self-image is fragmentary, the child being subject to the ebb and flow of instinctual energy across its body. The identification with the image in the mirror is the first step towards the formation of the ego, which is, as we can see from the process involved, a fictional creation.²⁰ In other words, this is a form of misrecognition, since the child merges with the specular image²¹ which is quite clearly other.

This primordial relationship of otherness does not end in childhood. The relation of the subject to an Imaginary other continues through adult life, forming, for example, the basis for later systems of ethics. Good and bad are initially differentiated in a spatial manner, assimilated to the self, or the other respectively. Binary systems of thought, such as ethics, are analogous to the Imaginary processes of introjection and projection of "good" and "bad" objects. This relation is thus informed by the conceptualization of difference in spatial terms: introjection and projection form the ground for the identificational and oppositional aspects of the Imaginary relationship. It would seem then that indexicality, as a means of identification with a preconceived role or

position, is involved in the Imaginary relationship, facilitating that relationship through socially-determined behavior.

However, indexicality, as I have defined it in relation to the "classical tradition" seems initially at odds with the Middle Byzantine system of church decoration, usually seen as the most complete expression of Byzantine religious thought. The Byzantines' usage of icons has been discussed primarily in relation to the Neo-Platonic theory of icons. This theory proposed that the relationship between the prototype and its image was analogous to the relationship between God the Father and Christ His Son. The prototype created its image just as God had created His Son, or as an object cast its shadow: in a world ordered by God, the image, the Son, and the shadow were created of necessity. Each element of the world was an image of a higher prototype, and each image took its place in a hierarchy of images which emanated from the Archetype, God. Though the image differed from the prototype in its essence, it partook of the prototype's sanctity through an identity of meaning. The reverence accorded to an image was transmitted through the image to its prototype, and ultimately to God.

Otto Demus has pointed out the close relationship between the architecture and the images of what he has termed "the classical system" of Byzantine mosaic decoration. Basically, the system called for a cross-shaped space formed by perpendicularly placed vaulted transepts. This space was crowned by a central dome. Demus has described this architecture as "hanging" architecture in which the eye of the seeing subject moves down from the uppermost dome to the lower vaults of the appended arms and the square of the church. This spatial arrangement fully accords with the Byzantine theory of the image, every image emanating from the divine and heavenly Archetype.²²

Each image was placed in a niche or vault, its placement being dependent upon its degree of importance in relation to God the Pantocrator (the All-ruler), whose place was in the central dome.²³ This hierarchical arrangement of the figures and scenes in the Middle Byzantine system of church decoration was metaphoric, in that it was a representation of the Byzantine conception of the cosmos. This metaphoricity was based on the

relation between the image and its prototype.

But an equally important aspect of this system of decoration was the relationship between the spectator and the images. The Byzantines' concern for this relationship was in part demonstrated by their staggering of the size of the images.²⁴ The images furthest from the viewer were larger in size than those closer to the viewer, eliminating the diminution of the figures caused by distance. Demus has noted as well that the curvature of space was enhanced by the Byzantines through the curvature of the mortar beds of the mosaics.²⁵ This technique emphasized the sharing of space between the subject and the image. Demus sees in this sharing of space a reaffirmation of the "magical identity" of the image with its prototype. I would suggest an alternate interpretation.

According to Byzantine philosophy the relationship between the subject and the holy image was a prescribed and strongly defined act of identification. Images were considered elements in a system of absolute value - a system of greater value than the relative value of worldly experience. Although the image existed principally in relation to the seeing subject, an act of identification with the image was not simply one aspect of this subject/object relationship. The act of identification was the requisite aspect of this relationship, the pure reflectivity of the "soul" being the goal of prayer. The image is therefore not simply a transparent signifier of a transcendental signified, but was part of a reality more palpable than everyday experience.

The Middle Byzantine system of church decoration could circumscribe this act of identification, through incorporating the subject directly into the hierarchy of images, the cosmos of the Byzantine church. The apparently real heavenly ranks of images indicated to the Byzantine viewer his or her place in relation to them.²⁶ In other words, the viewer, as an image among images, functioned as part of the heavenly hierarchy.

The Byzantine church was thus not solely referential, since it functioned as a presentation, rather than a representation of the cosmos. Each image was not simply a simulacrum: the image possessed a reality of its own, a reality more valued than the relative value of earthly

life. The formation of types in the depiction of holy persons was, in consequence, not simply a means of insuring the potency of the relation between the image and its prototype, but was a form of nomination. The visual characteristics of the images and the ever-apparent inscriptions of the names of holy scenes and personages functioned as markers of difference. Within the small curved space of the church each image was fixed and named, differentiated from each other and the viewer by formal characteristics, attributes, and names. As a part of this system, the viewer identified with the images while concurrently becoming aware of the difference between him or herself and the image. In light of my earlier discussion, it should be clear that this experience was closely tied to the Imaginary register.

The subject, encouraged by a Byzantine philosophy of the self to identify with an image, was consequently conflated with the ego. As I noted earlier, the ego is a fictional creation, formed through the act of identification with an image. It would seem that the Byzantine system of church decoration supported this act of identification by the subject: the act of identification being, a prescribed social role through the spatialization of relationships; that is, through the play or oppositions and identifications in relationships.

Thus within the Middle Byzantine system of church decoration the images, themselves fixed in relation to an imaged God, the Archetype, indicated to the viewer his or her place among them. And the viewer, whose movement around the church increased the reality of this experience moved only within a restricted area.

Significantly, this experience resonates with the experience of the writer or speaker of a cento, or Byzantine combinatory composition. The subject who articulated this discourse, whether spatial or verbal, moved within a restricted system of signifiers that was already determined. The articulation of each of these discourses acted as an index of the subject's position. Therefore, the primary connection that I am proposing between these two discursive practices is the Byzantine subjects' dependence upon indexicality as a method of signification, a dependence that formed and was informed by the objects I have discussed.

NOTES

1. This paper is a condensed version of chapter three of my unpublished Master's thesis "Icon as Index: A Theory of Middle Byzantine Imagery," State University of New York at Binghamton, 1981.
- 1a. These dates are the usual cut-off points for this period, 1204 A.D. being the year of the Latin sack of Constantinople, and 843 A.D. marking the end of Iconoclasm.
2. Beckwith, J., 1961, "The Veroli Casket," London, p.1.
3. See, for example, Weitzmann, K., 1951, "Greek Mythology in Byzantine Art," Princeton University Press, Princeton.
4. Foucault, M., 1972, "The Archaeology of Knowledge," New York, p. 21.
5. Mango, C., Antique statuary and the Byzantine beholder, Dumbarton Oaks Papers, no. 27.
6. Ibid., p. 60.
7. Ibid., p. 60.
8. Browning, R., 1977, "Studies on Byzantine History, Literature and Education, London, Chapter XIII.
9. Hunger, H., 1969/1970, On the imitation (mimesis) of antiquity in Byzantine literature, Dumbarton Oaks Papers, nos. 23/24, p. 18.
10. Ibid., p. 18
11. Ibid., pp. 22-28.
12. Ibid., pp. 33-34.
13. Ibid., pp. 33-34.
14. Jenkins, R.J.H., 1963, Byzantium and Byzantinism, p. 13, and The Hellenistic origins of Byzantine literature, p. 45, Dumbarton Oaks Papers, no. 17.
15. Jenkins, Byzantium, p. 8.
16. Ostrogorsky, G., Observations on the aristocracy in Byzantium, Dumbarton Oaks Papers, no. 25, p. 6.
17. Jenkins, Byzantium, p. 9.
18. Dewey, J., Peirce's theory of linguistic signs, Journal of Philosophy, Vol. 43, pp. 85-95.
19. Sheridan, A., translator's note for "The Four Fundamental Concepts of Psychoanalysis," by Lacan, J., 1977, p. 279.
20. Lacan, J., 1977, "Ecrits: A Selection," p. 2.
21. Ibid., p. 2.
22. Demus, O., 1964, "Byzantine Mosaic Decoration," pp. 5-14.
23. Ibid., pp. 16-22.
24. Ibid., pp. 30-35.
25. Ibid., pp. 12-13.
26. Ibid., pp. 3-13, 30.

A CRITIQUE OF LÉVI-STRAUSS' THEORY OF MYTH AND THE ELEMENTS
OF A SEMIOTIC ALTERNATIVE

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In his early work Lévi-Strauss claims that "the purpose of the myth is to provide a logical model capable of overcoming a contradiction" (1963:229). "Mythical thought always progresses from the awareness of oppositions toward their resolution." (1963:224). Lévi-Strauss suggests four logical processes whose function is precisely this mediation: In the analysis of the Oedipus myth he seems to claim that this is achieved through a homology between contradictories, i.e., the overrating of blood relations is to the underrating of blood relations as the affirmation of autochthonous origin to its denial. That is to say in general:

$$s_1: -s_1:: s_2: -s_2$$

In the analysis of the Zuni myth which follows, he cites three more processes: opposition and correlation, i.e., two opposite terms with no intermediary always tend to be replaced by two equivalent terms which admit of a third one as a mediator; then one of the polar terms and the mediator become replaced by a new triad and so on (1963:224). The other process is one very similar to the principle of generalized exchange (ibid:228) and "confronts us with a double, reciprocal exchange of functions" (ibid:219). Finally, there is also the familiar formula: $Fx(a): Fy(b):: Fx(b): Fa-l(y)$.

I would like to analyze and critique each of these processes in their turn, but before that is possible, an examination of the concept of the mytheme is important which through its critique, will simultaneously shed light on these four mytho-logical processes.

I. Critique of the Mytheme

According to Lévi-Strauss, "myth like the rest of language is made up of constituent units present in language when analyzed on other levels, namely, phonemes, morphemes and sememes--but they, nevertheless differ among themselves; they belong to a higher and more complex order. For this reason, we shall call them gross constituent units...or mythemes" (1963:210-11). The mytheme consists of a relation, i.e., a proposition which contains a subject linked to a function (ibid). In turn, these mythemes "are not isolated relations but bundles of such relations, and it is only as bundles that these relations can be put to use and combined so as to produce a meaning" (ibid. 211). Just as phonemes are bundles of distinctive features and grammatical structure bundles of morphemes, so the mythical structure are bundles of mythemes.

However, given the obvious Jakobsonian approach to the study of myth, I would argue that Lévi-Strauss does not consistently follow the model of structural linguistics. This results in certain inadequacies in the development of myth analysis in terms of mythemes, especially formulated in Lévi-Strauss' first study. Reproducing the well-known chart:

Cadmos seeks his sister, Europa, ravished by Zeus			
		Cadmos kills the dragon	
	The Spartoi kill one another		
	Oedipus kills his father, Laios		Labdacos=lame? Laios=left-sided
		Oedipus kills the Sphinx	
Oedipus marries his mother, Jocaste			Oedipus=swollen footed
	Eteocles kills his brother, Polynices		
Antigone buries her brother, Polynices, despite prohibitions			

Firstly, it is clear that the fourth column does not meet the criterion of a mytheme since it is not "a function linked with a subject," and therefore does not consist of a relation. Secondly, the organization of the column is performed, ostensibly through an identity of functions, but by means of an extrinsic category imposed upon the myth in such a way that the mythemes are interpreted in order to conform to it. This is especially noticeable in the first column. Why, for example, should 'Zeus ravishes Europa' be considered a case of overrating of blood relations, when Zeus and Europa are not even blood-related? Also is it not the case that burying one's brother despite prohibitions is of a different sort of overrating than incest? Moreover, it is relatively easy to establish a somewhat modified list of categories which could incorporate the same mythemes--for example, compare Michael Carroll's study (1978). In fact, by introducing other key mythemes which Lévi-Strauss fails to include, one could substantially change the meaning of the other categories. For example, the theme of 'banishment' is excluded in Lévi-Strauss' analysis: Cadmos is banished by Agenor, Oedipus abandoned by Laius, Oedipus' self-banishment, Poly-nices is banished from Thebes by Eteocles, etc. This argues, in fact that by bringing extrinsic categories to bear on the organization of the myth a certain arbitrariness in interpretation might result, and, there could be an indefinite number of categories which might always be added to existing ones. Moreover, even if a list of such categories could be completed, my suspicion is that these would come very close to a typology of functions in the sense of Propp.

However, if the phoneme is taken as a model it can provide a clue for the resolution of these difficulties. For example, the English /p/ and /b/ are distinguished not by extrinsic categories, but by means of their distinctive features inherent within the phoneme. Thus /p/ is unvoiced and /b/ voiced, although both are grave; yet the first is strong and tense, while the second weak and lax. Thus despite this difference, phonemes will also share some similarities, something which is not clear in the chart above.

II. Binary Opposition and Dialectical Mediation

But by arguing for a more accurate application of the Jakobsonian model to myth interpretation, this does not entirely resolve all difficulties. One such important difficulty is that of the role of binary opposition in Jakobson's

theory, an examination of which will simultaneously clarify the nature of opposition and contradiction essential to the logical processes of the myth. Arild Utaker, in his important article, "On the Binary Opposition" points out some of the inherent theoretical difficulties in the Jakobsonian model of binary opposition, especially as it is found in the classification of phonemes. To summarize, Utaker points out three basic types of oppositions in Jakobson's theory:

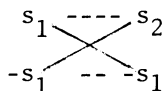
- (1) Qualitative oppositions: The presence of A excludes the presence of B in the phoneme. A/B ($A \vee B$).
- (2) Privative opposition: The presence of A implies (includes) the absence of B = non-B in the phoneme; in this case both A and non-B enter into a paradigmatic relation to B. $A/\text{non-A}$ ($A \vee \text{non-A}$).
- (3) Logical opposition: The presence of A in the phoneme excludes the absence of A. $A/-A$ ($A \vee -A$).

According to Utaker only the logical opposition and the privative opposition are necessarily binary; whereas the qualitative opposition is not necessarily binary since a quality can be opposed to various degrees of the same quality (ibid:82). Moreover, the privative opposition is a precondition for the qualitative opposition and for the distinctiveness of its two qualities: A and B are in polar opposition since A is non-B and B is non-A (ibid:81). In that case A is substituted for the absence of A in another phoneme. In turn, the logical opposition is a condition for both the privative and qualitative opposition.

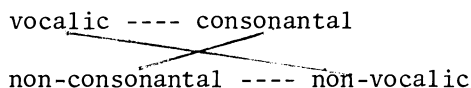
Given these insights, Utaker argues that the privative opposition seems to be Jakobson's paradigm of a binary opposition (since the logical opposition is a trivial one) (ibid:82). In this case, although there might be a tendency to characterize the non-polar qualities as simply a logical opposition, the characterization which would provide the most consistency for Jakobson's scheme would be to label it as privative opposition. However, this still does make Jakobson's theory completely coherent, since there is still difficulty in integrating the privative opposition together with the qualitative opposition.

Utaker utilizes an interpretation of Greimas'

"semiotic square" in order to address this issue:



The relation $s_1 \text{ ---- } s_2$ is a contrary relation; $s_1 \text{ ---- } -s_1$ a contradictory relation. The former can be interpreted as both a qualitative opposition and a privative opposition. But to avoid inconsistencies and contradictions in the model, Utaker suggests that the contrary relation would be considered only as qualitative opposition, while the contradictory relation that of a privative one (ibid:84-85). Substituting vocalic and consonantal for s_1 and s_2 respectively, this consistency becomes evident:



However, what makes the square interesting is its generative ability. Consider for instance the following four classes of phonemes:

vocalic and non-consonantal = vowels
 consonantal and non-vocalic = consonants
 vocalic and consonantal = liquids
 non-consonantal and non-vocalic = glides

While the vowels and consonants can be said to be generated from the qualitative opposition, vocalic/consonantal, the glides and the liquids are constituted by a privative opposition whose first term is the conjunction of the terms in the qualitative opposition and whose second term is the conjunction of the privative opposition of the terms in their opposing terms. This is the homology (ibid:85-86).

$$s_1: s_2 :: s_1 + s_2: -s_1 + -s_2$$

Otherwise one could not account for the binary oppositions that constitute the liquids and the glides. It is this model which is the more interesting as opposed to the ones suggested by Greimas, viz.,

$$s_1: -s_1 :: s_2: -s_2$$

and Lévi-Strauss, viz., the Oedipus myth as simply homologies between contradictions (1963:239), ending as empty, formal homologies. According to Utaker, it is his interpretation of the semiotic square which is most applicable to the study of myths, "where 'ordinary categories' are broken for some purpose or another." Thus metaphors can be accounted for by the ways categories are broken and combined in new manners (the opposition between s_1 and s_2 is broken in order to produce $s_1 + s_2$) (ibid:87). And, in general, this according to Utaker, seems to be in general a "formula" for what he wants to call "dialectical mediation" between binary oppositions.

This last point is highly suggestive for a theory of myth and confirmed by the work of Michael and Marianne Shapiro. They argue (along with Beardsley) that the oxymoron is the archetype and most apparent and intense form of verbal opposition. An opposition is a minimal paradigm, one term being in praesentia the other in absentia. However, in oxymoron, both terms are in praesentia, "since qualitative oppositions are understood to be or are reinterpreted as privative oppositions" (1976:23). In the example 'the living dead', if A (living) and B (dead), then $A = \text{non-B}$ and $B = \text{non-A}$. This means, firstly, that the oxymoron is fundamentally metonymic, since both terms are negations of each other and negation is metonymic (cp. ibid., 10FF); yet, the oxymoron is metaphoric since the paradigm/syntagm hierarchy is reversed (which precisely defines the metaphor (cp. ibid., 11ff)): mutual exclusion (the condition of paradigmaticity) is subordinated to mutual inclusion (the condition of syntagmaticity). "Put another way disjunction is superceded by conjunction" (ibid:23). Thus, using Utaker's formula:

$$A:B :: A + B : \text{Non-A} + \text{Non-B}$$

But more importantly the Shapiros argue that the oxymoron (again as prototype of troping) embodies a resolution to the mutual contradiction of stated oppositions "through its reconciliation of formal oppositions while evading a substantial rapprochement. There is then, a concordia discors in oxymoron..." (ibid:24). Just for the reason that "the structure of the oxymoron forms a natural bridge to...other varieties of symbolic process (e.g., dreams and magic)...." (ibid.), I would claim that it might serve also as a

prototype for mythic processes, consistent with Lévi-Strauss' claims, yet beyond the weak claim that myths exhibit homologies between contradictories.

III. Markedness and Value

A second difficulty with Jakobson's binarism is that, insofar as it has application to poetics (and for that reason application to cultural formations in general) there is a tendency to emphasize symmetry as a consequence of binary opposition while ignoring its inherent asymmetry. As Michael Shapiro points out, "linguistic relations are not only necessarily binary -- whence their symmetry -- but (crucially) also necessarily polar and qualitative -- whence their fundamental asymmetry." (1976:75). To the extent that asymmetry defines markedness and value, then such a concept of binarism as asymmetry overlooks this important phenomenon.

According to de Saussure "in language there are only differences." (1966:120). "A linguistic system is a series of differences of sound combined with a series of differences of ideas; but the pairing of a certain number of acoustical signs with as many cuts made from the mass of thought engenders a system of values..." (ibid.) It is for this reason that de Saussure claims: "language is only a system of pure values..." (ibid: 111). The value of a sign is a formal characteristic resulting from relations and differences with respect to the other signs of a language system (ibid: 117). Two factors are necessary for the existence of a value (ibid:115):

- (1) That they be composed of a dissimilar thing that can be exchanged for the thing of which the value is to be determined; and
- (2) That they be composed of similar things that can be compared with the thing of which the value is to be determined.

Value, on the one hand, is generated through the reciprocal situation of the pieces of language. For example, in regard to writing de Saussure argues that "values...function only through reciprocal opposition within a fixed system..." (ibid:120). Thus, so one might argue, one principle of a semiotic system is that of reciprocity or exchange

between oppositions or differences. On the other hand (2) demonstrates the operation of a principle of analogy by which similarities between values are compared.

As Shapiro and Anderson¹ have shown, the idea of value in de Saussure can be re-clarified in terms of the notion of markedness. According to Shapiro it is in terms of markedness, "and markedness alone," that any semiotic structure is endowed with its evaluative component. And it is the evaluative component which gives a means of integrating signs into coherent principles of organization (1976:92). Moreover, "...it is precisely via markedness that the asymmetric character (i.e., the complementary, differential character) of language stands out in sharpest relief." (ibid:13). "Markedness is the dominant axiological principle governing semiotic systems, generated by the polar qualities of oppositives." (ibid:26). As opposed to Jakobson who favors the mathematical-physical notion of polar opposition -- i.e., the idea of invariance or symmetry -- Shapiro argues for the priority of asymmetry present in polar oppositions (ibid:26). Of the two terms that constitute the polar opposition, the one labelled marked represents a formally more complex or narrowly defined value, whereas the other term, labelled unmarked, represents a formally less complex or less narrowly defined value (ibid:27). Thus for the English phonemes /p/ and /b/, /b/ is marked in regard to voice, whereas /p/ is unmarked in that aspect. On the level of the lexicon man is unmarked in regard to gender, whereas woman is².

IV. Critique of Lévi-Strauss' Program

Utaker's critique of Jakobson's binarism produced a rule of "dialectal mediation," namely,

$$s_1: s_2 :: s_1 + s_2 : -s_1 + s_2$$

This has certain advantages over Lévi-Strauss' rule of mediation as simple homology between contradictories. The examination of binary opposition in terms of markedness disclosed the process of reciprocity and analogy inherent in the nature of a valuative system. These last two processes are argued by Lévi-Strauss as processes essential to the myth. Analogical mediation occurs in the following way: two opposite terms with no intermediary always tend to be replaced by two equivalent terms which admit of a third one as a mediator; then one of the polar terms and the mediator become

replaced by a new triad and so on (1963:224). As an example:

<u>Initial pair</u>	<u>First triad</u>	<u>Second triad</u>
Life	agriculture	herbivorous animals
		carrion-eating animals
	hunting	beasts of prey
	warfare	

death

Carrion-eating animals are like beasts of prey (they eat animal food), but they are also like good-plant producers (they do not kill what they eat). This is essentially what Lévi-Strauss calls a process of "opposition and correlation" (ibid:225).

However, upon closer examination, mediation as this process of correlation and opposition is unclear in Lévi-Strauss. It is not clear why 'agriculture' and 'warfare' would be 'equivalent' terms since, assuming agriculture contains, in fact, an aspect of death, viz., death of plants.

However, it should be noted that, as Lévi-Strauss has emphasized, carrion-eating animals are always in the position of mediators; but keeping Utaker's schema in mind, it might be possible to see the reasons why this would be the case more clearly. Carrion-eating animals are neither beasts of prey nor herbivorous animals, the former since they do not hunt, the latter since they eat meat. Thus, in accordance with Utaker's formula:

$$\frac{\text{beasts of prey}}{\text{herbivorous animals}} - \frac{\text{beast of prey} + \text{herbivorous animals}}{\text{non-beasts of prey} + \text{non-herbivorous animals}} = \text{man} \sim \text{carrion-eating animals}$$

However, clearer examples of what might be called "analogical mediation" can be found. In the Cadmos-Oedipus myth, as narrated in Apollodorus' Library, we can find in the beginning of that segment (Bk. III, 2) a unit of action perhaps

pair plus a messiah present simultaneously; and while the point of departure was ostensibly formulated in terms of space reference (Sky and Earth), this was nevertheless implicitly conceived in terms of a time reference (first the messiah calls, then the dioscurii descend)" (ibid:226f). This, as Lévi-Strauss notes, is a process similar to that of generalized exchange (ibid:228). In kinship terminology this occurs when groups in which men of group A give women to B, who give women to C, who complete the circle by giving women to A (examples: matrilinear and patrilinear cross-cousin marriage). This idea of exchange is clarified in his Elementary Structure of Kinship.

It is man's ability to organize biological relations as systems of opposition which is the condition of the possibility of exchange (1969:136). Kinship exchange, in its general aspect, is a phenomenon of reciprocity (1969:143). Reciprocity, in turn, is a synthesis of oppositions. For example, in economic exchange, reciprocity synthesizes the opposition between private property and common ownership, both of which are a denial of reciprocity (1969:490). In matrimonial exchange, it is the mediation of woman as the object of personal desire and the object of the desire of others (1969:86). In general, reciprocity entails a mediation between I and Other (ibid:84). In fact, the process of opposition and correlation which is basic to the definition of the dualistic principle (in turn essential to dual organization in kinship structure), is itself one modality of the principle of reciprocity (ibid:83) and which as Lévi-Strauss points out is an operative principle in myth (1963:225). For Lévi-Strauss, then, the human mind, perceiving relations of oppositions in natural reality, reconciles and mediates them through the structures of reciprocity.

Finally, there is the last process which Lévi-Strauss mentions, viz.:

$$F_x(a) : F_y(b) :: F_x(b) : F_{a-1}(y)$$

Given two terms, a and b, and two functions, x and y, of these terms, it is assumed that a relation of equivalence exists between two situations defined respectively by an inversion of terms and relations under two conditions: (1) that one term be replaced by its opposite; (2) that an inversion made between the function value and the term value of two elements.

In their work, Structural Models in Folklore and Transformational Essays, Elli and Pierre Maranda attempt to elaborate and support this last formula, and for this reason perhaps it would be best to examine this formula by means of its application in their work. Unlike mediation by analogy (opposition and correlation), which is "linear," according to the Marandas, Lévi-Strauss' formula is non-linear, i.e., it implies a permutation of roles or functions and of terms, since 'a' which is given as a term becomes once inverted, 'a-1,' a sign of function, and 'y', which is given as sign of function, becomes 'y', i.e., a term which is the final outcome of the process. So, for example, "if a given actor 'a' is specified by a negative function f_x (and thus becomes a villain), and another one 'b' by a positive function f_y (and thus becomes a hero), 'b' is capable of assuming in turn also a negative function, which process leads to a 'victory' so much more complete that it proceeds from the 'ruin' of the term 'a' and, therefore, definitely establishes the positive values 'y' of the final outcome." (Ibid: 26-27).

However, a closer examination of Lévi-Strauss' formula shows the following conditions:

- (1) What 'a' performs, 'b' performs, $F_x(a) \text{----} F_x(b)$.
- (2) 'a' performs 'x' but then a performance 'y' is transformed into an agent, and an agent, the opposite of 'a' is transformed into a function, such that 'y' performs a^{-1} .
- (3) There exists an analogical relation between 'a' performing 'x'/'b' performing 'y' and 'b' performing 'x'/'y' performing a^{-1} .
- (4) 'y' performing a^{-1} is the end result of a process of mediation.

Keeping these conditions in mind, I would now like to turn to an examination of the Marandas' application of this formula to the analysis of folklore. The Marandas argue that it is only in their Model IV (successful mediation: permutation of initial impact) that we have an "unquestionable exemplification of Lévi-Strauss' formula" (ibid:66). As an illustration they use the following schwank:

Well, once a farmer and his servant were starting their meal, as the neighbors were eating, too. So the farmer said,

"Let's pretend eating, but not eat."

The servant contended himself with it, and then when they went to the field to mow, the servant took the blade off the scythe and said, well,

"Now let's pretend mowing, but not mow." (ibid:66).

a = authority, b = servant, x = pretending, y = accepting
pretense

Marandas' final interpretations reads: "If pretending authority results in the servant's acceptance of pretense, then the servant's pretense results in the permutation of the authority function of accepting pretense." (ibid:67).

This example shows clearly also the weakness of Lévi-Strauss' formula. If the corresponding function attached to a master is 'to command', then, for example, in changing the term 'a' into a function, the more likely change would be 'commanding' or 'ordering.' In turn, in order to expedite the last part of Lévi-Strauss' formula $f_{a-1}(y)$, a function 'y' would be transformed into an agent. Thus, if 'commanding' is the function, then 'commander' or 'master' would be the likely choice for its corresponding term. Similarly, if 'pretending' is the function, then its corresponding term should be 'pretender.' In opposing $f_x(a)$ to $f_{a-1}(x)$ then: if $f_x(a) \rightarrow f_{a-1}(y)$ would be the transformation from a master who pretends to someone who accepts pretense (perhaps a 'fool'), who serves. But, firstly, although we may wish to call the farmer a fool in this case, the schwank does not end by the farmer and servant exchanging roles. Certainly, there is a weakening of the farmer's authority, but it has not disappeared into its opposite. In fact, this schwank displays a simple reciprocity:

The Farmer does not give his servant proper food.
The Servant does not give his master proper work.

NOTES

1. Cp. Shapiro (1976); Anderson (1974).

2. Cp. To support Shapiro's claim against Jakobson further, we might point out, as Utaker has shown, that privative opposition must be the paradigm of opposition for his system. Yet, as Barthes (1980:76ff) following Martinet has pointed out, privative oppositions can be characterized in terms of markedness.

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THE CIVILIZATION OF ILLITERACY

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In order to set before you, at the very beginning, the matter that I address here, allow me to bring to your attention a poem written by Victor Hugo over a century ago (1872):

L'année terrible

Tu viens d'incendier la
Bibliothèque?

--Oui.

J'ai mis le feu là!

--Mais, c'est

un crime inouï!

Crime commis par toi contre
toi-même, infâme!

As-tu donc oublier que ton lib-
érateur, c'est le livre?

Le livre est ta richesse à toi!
C'est le savoir.

Le droit, la vérité, la vertu,
le devoir,

Le progrès, la raison dissipant
tout délire.

Et tu détruis cela, toi!

--Je ne

sais pas lire.

The Terrible Year

You have just burned the
Library?

--Yes.

I set it on fire!

--But that

is an unheard of crime!

A crime committed by you
against yourself, villain!

Have you forgotten that your
liberator is the book?

The book is your wealth!
It is knowledge.

Right, truth, virtue, duty,

Progress, reason dissipating
all madness.

And you, you destroy that!

--I

don't know how to read.

My problem in this paper (which is part of a comprehensive semiotic work in progress) is not whether the book, and accordingly the library, is the highest attainment of literacy, nor if illiteracy means the inability to read. The

various meanings of the term illiteracy are so well documented that they need not be recalled here.¹ (However, as a decent member of the academic species, I do provide footnotes and bibliography in a reference section.) The question I deal with here is not if the infamous arsonist should be forced into the social mechanism that produces literates (be it church, school, social program, etc.) but whether he is a necessary product (necessary will sometimes be involved in the concept of the objective, i.e., independent of us) of a development which, if it does not make the library and the book obsolete, imposes new values and new criteria of civilization. The first objection which could be raised is to what extent is this subject approachable from the perspective of semiotics; a second: how can we infer from a reality not yet resolved and very contradictory to a future already burdened by so many predictions (from extremely fatalistic to fatally extremely optimistic)? Other objections can be raised, too, but it is beyond the point to exhaust every possibility since I am considering one of those processes which embodies, in the Peircean phaneroscopic categories, transition from Possible to Necessary. I've just identified the type of semiotics I apply in my research so that each time the elementary terms of this semiotics are used, you will know that they belong to the terminology set forth by Peirce (and will not expect me to repeat his definitions unless I thought I had to modify or complete them).

The common opinion is that illiteracy, a phenomenon far from being peculiar to the United States, is due either to the low quality of the educational system or to the disastrous effects of the new media. In other words, the person listening to Hugo's romantic rhetoric--and supposed to understand such eccentric words as knowledge, right, truth, virtue, duty, progress--had no access to a school (as still occurs in parts of the world), had bad teachers (I shouldn't say this here, should I?), or grew up in a half-real world in which radio, television; mixed media, etc. made him neglect the virtues of writing, correct speech, and understanding verbal messages. Without ignoring these causes--actually I consider them symptoms of the necessary development to be discussed here--I should remark that Hugo's illiterate, who I choose as a preliminary model, is not the same as the contemporary illiterate, and the latter, in his or her turn, is not the same in the Western world, in the self-proclaimed socialist countries, or in the Third World, although, as it will be pointed out, the illiterates from these parts have

more in common than the fact that they live during the same period. What concerns us here is the so-called functional illiteracy in the industrialized countries, i.e., that inability on the part of individuals who have had schooling, some who have university degrees, to properly use and comprehend verbal language.

In order to understand how illiteracy is produced, we should first consider what determined the need for literacy and how this need progressively changed.² (I repeat, please see the reference section to obtain details.) Semiotics is entitled to introduce its own perspective in this respect since literacy is nothing more than the degree of competence an individual or a group has acquired in the use of language, verbal language being only one among others. (The term competence should not make you think that what follows is a discourse in Chomskyan linguistics, quite to the contrary in some respects, although any polemic will be indirect.) The main instrument I discovered that I have to use in order to explain the processes involved in the transition from illiteracy to literacy and now to a new stage of illiteracy is the traditional concept of labor division. Language, as the most complex semiotic system we know of, corresponds to that stage of evolution of the natural species homo sapiens which provided the latter with a social characteristic. Elementary forms of praxis (I prefer the Greek praxis to the often used and obscured English practice) such as hunting, fishing, agriculture, cattle-raising, seeking shelter, involved relatively simple sign systems generally kept near the objects represented, i.e., relating indexically or iconically the represented and the representamen (for orthodox Saussurians, the signified and the signifier, respectively). In fact, this represents a pre-semiotic stage to be transcended as soon as the division between material and mental labor takes place, i.e., as soon as the field of the interpretant becomes possible and necessary. However, we must distinguish between the signs involved directly in praxis and those participating in the interactions between individuals or, to put it in a different perspective, between the relational and the functional aspects of the sign as used by man. The relational dimension of the sign is expressed by the way (modus) the human subject represents his knowledge, belief, feelings, etc., the functional by the goal (telos), practical, theoretical, aesthetic, etc. that the sign has to accomplish. The development towards literacy--and the variety of ways literacy is embodied in different cultures--offers enough

reasons to conclude that verbal language plays an important but contradictory role in the progress of mankind; that is, it participates in the further differentiation of human praxis but also in the continuous alienation of human beings. Anthropologists keep disputing over language's contribution to the historic process leading to contemporary society. Although they are united in explaining the need for literacy, they panic before the reality of a highly developed society in which illiteracy has reappeared and spreads at a fast pace. Contemporary society is far more fragmented than any other earlier society. Earlier types are recognized as being local, sometimes parochial, and generally quite homogenous. Perspectives and premises were formed and shared within a group and consequently verbal language was adequate to the task of communication in which the essential function accomplished was the conveying of the denotative value of the signs used. Sharing of meaning progressively appears in the field of the interpretant and together with it, specialized languages referring to differentiated contexts participate in new forms of the semiotic pragmatic.

In general, there is a tendency towards confusing cause and symptom, and here I return to my statement that the low calibre of the educational system or the influence of the new media are symptoms of a much deeper process in which our entire axiology is involved. Mankind is at the beginning of a new phase of its social development, a phase in which the human praxis determining our identity in the world we live in changes from direct relation between the subject and object of its work towards mediated relation. The mediation is one carried out through signs--in fact, the definition of the sign should be that of a mediating entity--and it extends from material to intellectual praxis. Labor division in modern society causes traditional activities to become either nonessential and symbolic or turns them into forms of work mediated through new technology. In contemporary praxis, the human subject comes less and less in contact with the primary object, be it from the natural environment (soil, animal, meteorological element, etc.) or even from the cultural environment. The cause of labor division is the perceived need to attain the highest possible level of efficiency in order to provide not only enough, at a certain qualitative standard, but also on a competitive basis. In the first stages of this process, verbal language provided the perspective of the whole. It was even said (Marx, 1844) that the conflict involved in the division between intellectual and material

activity could be avoided by transcending labor division, an idea which has proven to be not only romantic but also unrealistic.

The new phase in the development of the industrial society is that of predominantly semiotically oriented human praxis. The semiotization of praxis means not only that mediatization marks each type of activity but also that specialization imposes the need for languages able to take part in productive activities. Specialization improves professional competence mainly in terms of higher efficiency but also continually undermines the reciprocal communication between those forced by labor division to specialize and the same seen as beneficiaries of specialization. We know that the quality of language diminishes, the perception of meaning deteriorates; we know also that language, as it developed through history, is less and less trusted even by those who we can call professionals in language. This phenomenon extends to all forms of what we call culture, the sphere of interpersonal relationships (love and family included). At the same time, semiotization, taking both the forms of mediatization and specialization, extends outward to social praxis. Labor division, as an objective necessity stemming from our urge to fulfill our needs and desires in an efficient way³ participates in processes through which we are continuously turned into illiterates in respect to those languages shaping our lives: the language of the lawyer, of the physician, the financier, educator, philosopher, artist, of the politician, and so on. The phenomenon of illiteracy is thus the reflection of the fact that in a social reality set on high efficiency, people are coming to need written and spoken language, as we have known it up to now, less and less. Phrases like "my lawyer", "my agent", "my representative" are evidence of the fact that responsibility is passed on to those especially trained and skilled for the particular job and tends to disappear from our traditional set of values. In current social praxis, the use of language is progressively taken from the individual and transferred to professionals with high semiotic competence in their specialty. Mediatization takes place also in the sphere where traditional direct contact between subjects, due on the one hand to an expanded normative social status (extending to the intimate) and on the other, to the same subjects' striving for efficiency. It is not the computer that changed the relationship between the physician and the patient, the seller and the buyer, the teller and the holder of a bank account, the library and the

reader, the language laboratory and the student, etc., but, again, the increased mediatization and specialization resulting from labor division, and this the result of our very conscious striving towards more, better, faster, sooner, etc. at the lowest cost (as we perceive that to be). In our days, influence and power are no longer exercised through verbal language.⁴ And here we must introduce an aspect related to today's illiteracy: the unprecedented growth of visual modes of communication. In contrast to that period when written language was the most efficient way of reaching the intended audience (either monarchs, clerics, philosophers, professors, i.e., those who made decisions that effected the material or spiritual life of man, of the masses) and enhanced by Gutenberg's printing press, that period which saw the flowering of literature and language as an art, we are living in an era in which the visual has become the most efficient means of communication. The impetus behind this means has changed due to the intentions of the users and their level of instruction, competence, and moral values. Here, a false sense of democracy equalizes messages to their lowest common denominator where proper use of verbal language is perhaps secondary to the aim of getting the intended message across.⁵ Televised debates are a good example of this. During the debates between the Presidential candidates, for instance, the nominees, often not answering the questions put to them, followed the instructions given by their semiotic experts (public relations people, as they are commonly called): If you are asked a question you cannot answer, say anything but don't show anger or confusion. (I paraphrase from a news report aired on NBC on the evening of September 26). We seem to be following the maxim that "One picture is worth a thousand words." And when the verbal and visual are combined, the experts know that it is what we see which will reach the mind of the perceiver.⁶ And why not? That each and every person was ever meant to or could be literate to the degree that humanists hope for or that modern life demands is an idea which should be re-examined. The disgust and despair resulting from too much language--propaganda in its capitalist and communist forms which obscure meaning where it once could exist bear the greater guilt here--and the terror towards specialized languages are reactions that do not historically justify the transition to the current illiteracy but which should be seen in the proper perspective. In view of these developments, we are obliged to cultivate alternative types of literacy that encompass all its subsystems (the visual, the auditory, probably the olfactory, the tactile, etc). In

the domain of communication, we must abandon centralization around the verbal model and return to a concept of decentralization, i.e., a framework in which several semiotic centers co-exist.

The new forms of praxis we are assimilating and adapting to generally reflect, at the beginning, the structure of verbal language. In the process of their better adaption to the semiotic exigencies of specialization, this structure changes, and accordingly we must develop new ways of approaching the semantics and pragmatics involved. Specialization isolates the individual, his world tends to be limited to the direct environment while at the same time, new semiotic devices integrate the individual into the most comprehensive system of interrelations and interdependency. The world is semiotically brought into his house; work can take place there; education, enjoyment, privacy, everything becomes a terminal matter. The arsonist from Hugo's poem has less and less chance to set a library on fire; it is turning into a means of terminal(ized) instruction in which reading, after writing, becomes a matter of visual perception.

This is not science fiction and should neither be seen as a humanist's appeal to save our traditional view of literacy. The worry and furor surrounding today's illiteracy reflect the inability to understand why the civilization we have been moving towards since the beginning of the Industrial Revolution has to abate so that we may free ourselves from a certain use of language and the values corresponding to it and cease thinking in terms of a unique literacy. The semiotization of human praxis means the expansion from the civilization dominated by one type of language to one in which several systems function simultaneously.⁷ The civilization of illiteracy transforms mankind's sign-related activity into a major force of production. Man thus turns to the stage of zoon semiotikon (semiotic animal), one more phase in an evolution in which we should never think or believe that mankind is an end in itself. Hugo's poem can be read through the centuries. Libraries will have been built and burned many times. The character under interrogation is none other than historic necessity, and as we know, necessity is illiterate. Our only hope is to understand it. Semiotics, in its interdisciplinarity and exercising its integrative nature, can assume the challenge and responsibility that historic developments have laid before us.

NOTES

1. "That person is literate who, in a language he speaks, can read with understanding anything he would have understood if it had been spoken to him; and can write, so that it can be read, anything that he can say." Gudschinsky, S., 1976, "Literacy: The Growing Influence of Linguistics," Mouton, The Hague.

"The meaning of literacy (...) changes according to the context, and it is the responsibility of the historian to specify the appropriate level of literary skills consistent with his understanding of the context." Schofield, R.S., 1968, The measurement of literacy in pre-industrial England, in: "Literacy in Traditional Societies," J. Goody, ed., Cambridge University Press, Cambridge.

Other references can be found in Baron, N.S., 1981, "Speech, Writing, and Sign," Indiana University Press, Bloomington.

2. Havelock, E., 1976, "Origins of Western Literacy," The Ontario Institute for Studies in Education, Toronto.

"A man sitting alone in his personal library reading is at once the product and begetter of a particular social and moral order. It is a bourgeois order founded on certain hierarchies of literacy, of purchasing power, of leisure, and of caste." Steiner, G., 1972, After the book?, Visible Language, 6, pp. 197-210.

3. "The division of labor is a true division 'only from the moment a division of material and mental labor appears (/The first form of ideologists, priests, is concurrent/). (...) From this moment on consciousness can emancipate itself from the world and proceed to the formation of "pure" theory, theology, philosophy, ethics, etc." Marx, K. and Engels, F., "The German Ideology," cf. 1967, "Writings of the Young Marx on Philosophy and Society," L.D. Easton and K.H. Guddat, eds. and trans., Doubleday, Garden City.

4. Lévi-Strauss, C., 1962, "Tristes Tropiques," Plon, Paris.

"Si l'écriture n'a pas suffi à consolider les connaissances, elle était peut-être indispensable pour affermer les dominations. (...) La lutte contre l'analphabétisme se confond ainsi avec le renforcement du contrôle des citoyens par le pouvoir. Car il faut que tous sachent lire pour que ce dernier puisse dire: nul n'est censé ignorer la loi."

5. Heilbroner, R., June 11, 1981, The demand for the supply side, in The New York Review of Books.

6. Saldich, A.R., 1979, "Electronic Democracy," (Television's Impact on the American Political Process), Praeger Publishers,

New York.

See also Fromm, E., 1976, "To Have or to Be?" Harper & Row, New York.

7. "The words of the language, as they are written or spoken, do not seem to play any role in my mechanism of thought. The physical entities which seem to serve as elements in thought are certain signs and more or less clear images which can be 'voluntarily' reproduced and combined." Albert Einstein. See Bremster, G., 1955, "The Creative Process."

MYTH AND SYMBOL IN VICO AND THE 'ROMANTIK': SOME REMARKS

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INTRODUCTION

On March 5, 1787, Goethe, in Naples, noted in his travel journal his acquaintance with the work of an old writer considered a man of unfathomable depth (*unergründliche Tiefe*): Giovan Battista Vico. A glimpse of the book, that the knight Filangieri handed him as a sort of relic, gave Goethe the impression of "sibylline presages of good and justice... founded on serious reflections on past and life" ("*Sibyllinische Vorahnungen des Guten und Rechten... gegründet auf ernste Betrachtungen des Überlieferten und des Lebens*," Goethe, 1862:235) and thought that the German nation might find such a patriarch in Hamann. This philosopher, a great *Schwärmer* of the early German Romanticism had gotten a copy of the *Scienza nuova* ten years earlier in Florence, and wrote about it to J. G. Herder, who, when traveling through Italy in 1789, was perhaps directly acquainted with Vico's work. It seems, however, that Herder had no insight of the depth of the Neapolitan philosopher and of the great affinity with his own thinking (see his reference in his *Briefe zu Beförderung der Humanität*) (1881, v. 18:246). Still in the early XIX century, Vico's philosophy, besides some explicit references in Fr. H. Jacobi (*Ueber den göttlichen Dingen und ihre Offenbarung*, 1811) and Fr. von Baader, had not penetrated German culture, in spite of the translation of the *Scienza nuova*, published in 1822 by Weber. In Hegel's *Vorlesungen über die Ästhetik* (1826) some influences are already apparent: see, for instance, the passage on the emergence of artistic and religious consciousness, as well as of scientific research, from Wonder (...dass die Kunstanschauung überhaupt wie die

religiose -- oder beide vielmehr in einem -- und selbst die wissenschaftliche Forschung von der Verwunderung angefangen habe" Hegel, 1955:310), and confront it with Vico's observations in the chapter "Della metafisica poetica": "e si' incominciarono a celebrare la naturale curiosita', ch'e' figliola dell'ignoranza e madre della scienza, la qual partorisce, nell'aprire che fa della mente dell'uomo, la meraviglia..." (Vico, 1957:155) ("Born of their ignorance of causes for ignorance, the mother of wonder, made everything wonderful to men who were ignorant of everything" 1968:116, #375).

This brief survey is intended to supply only a vague framework to the present study. Since it is here impossible to reconstruct an exhaustive picture of Vico's influence on the philosophy of the Romantik, I will focus on a few themes: (the inadequacy of symbol, the radical metaphor that founds both myth and language).

MYTH AND SYMBOL IN VICO

Origins of Symbolic Activity

At the beginning of the II book of the Scienza nuova, dealing with the poetic wisdom, Vico stresses the wild and barbaric character of human origins: in fact, "the nature of everything born or made betrays the crudeness of its origins" (p. 109, #361) "La natura delle cose che sono mai nate o fatte comporta che sieno rozze le loro origini" (p. 143.) Only the conceit of nations and of scholars have diffused a halo of mystical and philosophical wisdom around the obscure beginnings of mankind. In the I book, "Establishment of Principles," Vico, commenting on the fourth Axiom: "A tal boria di nazioni s'aggiugne qui la boria de' dotti, i quali, cio' ch'essi sanno, vogliono che sia antico quanto che 'l mondo (ritruovata da Adamo, a cui Iddio concedette la divina onomathesia, ovvero imposizione de' nomi alle cose secondo la natura di ciascheduna) ma fu un parlare fantastico per sostanze animate, la maggior parte imparate divine" (p. 170) ("that first language... was not a language in accord with the nature of the things it dealt with (as must have been the sacred language invented by Adam, to whom God granted divine onomathesia, the giving of names to things according to the nature of each), but was a fantastic speech making use of physical substances endowed with life and most of them

imagined to be divine") (p. 127-8, #401).

This definition of the **primitive** poetic language gives an idea of Vico's great originality in respect of both rationalist and empiricist traditions. In the former, the problem of language is treated within the context of universal logic (especially Leibniz). This position ultimately traces back to Plato, who, in his *Cratylus*, makes a reductio ad absurdum of the naive idea of an immediate relation of similarity between words and things, and proposes a deeper, mediate relation, in which the fluidity and ambiguity of language is contrasted with the fixed and clearcut significations of concepts, the βεβαίотης (steadfastness) of the world of ideas (cf. *Cratylus*, 438E: "ἔστιν ἄρα, ὥς ἔοικεν, δυνατόν μαθεῖν ἄνευ ὀνομάτων τὰ ὄντα." "it seems that things may be learned without names"). In the empiricist school, on the other hand, (Bacon, Hobbes, Locke), concepts, referred to by words, are not eternal essences, but mere generalizations of sensory data. In both theories, however, attention is drawn on the theoretical content of language, i.e., its relation to the nature and development of knowledge. If words are signs for ideas (conceived either as objective contents of cognitions or as subjective representations) language appears as the product of an arbitrary act, a mere convention.

Vico, on the contrary, contends the fundamental role of sensations, passions and fantasy in the genesis of the primeval language, thus hearkening back to Epicurus, who considered πάθος (affection) as the true source of language (that, therefore, is as 'natural' as sensation itself) (See, e.g., the Epicurean Lucretius:

Postremo quid in hac mirabile tantoperest re,
si genus humanum, cui vox et lingua vigeret,
pro vario sensu varia res voce notaret?
(V: 1056-58)

("lastly why should we wonder if the human race, having active voices and tongues, marked things with varying sounds, according to varying feelings?")

Vico's originality, however, even more clearly emerges in his way of dealing with a topos of Neoplatonic speculations on symbolism.

Inadequacy of Symbol

The inadequacy of symbol (i.e., the distance between form and meaning), already alluded to in myth as riddle and oracle, had been recurrently treated in Neoplatonic philosophy and Christian theology. In the celestial hierarchy (a very influential work, written at the end of the V century A.D., and belonging to the corpus of Dionysius the pseudo-Areopagite) two ways to the divine are presented: the affirmative one (κατάφασις) and the negative (ἀπόφασις). In the former, there is a danger that analogic language involves a literal interpretation of the figures, while in the latter, the very inadequacy of symbols prevents any immediate identification of form and content, and urges a quest for more profound and arcane meanings:

"ὅτι καὶ τοῦτο τοῖς μυστικοῖς λογίοις προποδέστατον,
τὸ δι' ἀπορρητῶν καὶ ἱερῶν αἰνιγμάτων ἀποκρύπτεσθαι
καὶ ἄρατον τοῖς πολλοῖς τιθέναι τὴν ἱερὰν καὶ
κρυφύαν τῶν υπερκοσμίων νοῶν ἀλήθειαν."

(ciii, v.)

("And what is most adequate to mystical discourses is to hide by means of mysterious and sacred riddles, and to make inaccessible to the multitude the sacred and secret truth of the heavenly minds"). In this way the Christian theologian can justify the use of symbols with the argument of the Platonic doctrine of the two worlds: the one sensible and corruptible, that imperfectly mirrors the world of the eternal and immutable essences.

From such a metaphysics emerges the belief that the human mind may catch a glimpse of the intelligible world by means of some poignant symbols.

In Vico's perspective on the other hand, the cognitive process is based on an imaginary and symbolic representation of the world: human knowledge refers only to what man himself creates, first of all with his senses and phantasy. Therefore, it is not a matter of catching some essences floating outside, but of shaping things by means of language and mythology. The primitive mind, immersed and buried in the body, shocked by an unknown world, with the only support of the senses and imagination, begins to build a cosmos at its own measure. And since man in his ignorance makes himself the rule of the universe, according to that fantastic metaphysics homo non intelligendo fit omnia, because "when man understands, he

extends his mind and takes in the things, but when it does not understand he makes the things out of himself and becomes them by transforming himself into them" (p. 130, #405). The inexpressibility proper to the mystical experience, becomes the striving for giving the inexpressed a shape.

SYMBOL IN THE GERMAN ROMANTIC CULTURE

The aforementioned Neoplatonic tradition developed differently in the XIX century's German culture.

Creuzer

In his monumental work Symbolik und Mythologie der alten Völker besonders der Griechen (1810), Fr. Creuzer makes a sharp distinction between the transparence of the embleme and the arcanum of the symbol. From an aesthetic viewpoint such a dichotomy appears as an antithesis between the clear plasticity of the artistic symbol and the obscurity of the religious, or mystical, one. "Hier waltet das Unaussprechliche vor, das, indem es Ausdruck sucht, zuletzt die irdische Form, als ein zu schwaches Gefass, durch die unendliche Gewalt seines Wesens zersprengen wird." ("What is dominant here is the inexpressible which, in seeking expression, will ultimately burst the too fragile vessel of earthly form by the infinite power of its being"); in the plastic symbol, on the other hand, "strebet das Wesen nicht zum Überschwenglichen hin, sondern der Natur gehorchend, füget es sich in deren Form, durchdringet und belebet sie" ("the essence does not strive for the extravagant, but, obedient to nature, adapts itself to natural forms, penetrates and animates them."

Hegel

This basic idea is resumed by Hegel, with a strictly philosophical language, in his distinction between classical art and pre-art (Vorkunst), namely, symbolic art (see the second part of his Vorlesungen über die Ästhetik).

In classical art, identified by Hegel with Greek art, there is a perfect harmony of form and content: "Den Mittelpunkt der Kunst macht die zu freier Totalität in sich abgeschlossene Einigung des Inhalts und der ihm schlechthin angemessenen Gestalt aus. Diese mit dem Begriff der Schönen zusammenfallende Realität, zu welcher die symbolische

Kunstform vergebens anstrebte, bringt erst die klassische Kunst zur Erscheinung" (p. 413) ("The central point of art's evolution is the union, in a self-integrated totality, carried to the point of its freest expression of content and form wholly adequate thereto. This realization, coinciding as it does with the entire notional concept of beautiful, towards which the symbolic form of art strove in vain, first becomes apparent in classical art.") In symbolic art, indeed, a veritable fight (Kampf) between a content, still resisting true art, and a form equally inadequate, takes place: "Die ganze symbolische Kunst lässt sich in dieser Rücksicht als ein fortlaufender streit der Angemessenheit und Unangemessenheit von Bedeutung und Gestalt auffassen, und die verschiedenen Stufen sind nicht sowohl verschiedene Arten des symbolischen, sondern Stadien und Weisen ein und desselbigen Widerspruchs" (p. 312) ("We may in short describe symbolic art throughout as a continuous war carried on between the comparative adequacy and inadequacy of its import and form; and the varied gradations of symbolic art are not so much kinds of specific difference as they are stages and phases of one and the same incongruity"). Instances of this art may be found in ancient Egypt and India. Egyptian art, in particular, is enigmatic par excellence: the mystery concealed in it is inaccessible not only to us, but even to those who created it. The sphinx is itself the symbol of the symbolic (das Symbol des symbolischen).

Ambiguity is often judged by Hegel as a basic element in the very structure of symbol: "...das Symbol, obschon es seiner Bedeutung, nicht wie das bloss äusserliche und formelle Zeichen, gar nicht adäquat sein darf, sich ihr dennoch umkehrt, um Symbol zu bleiben, auch nicht ganz angemessen machen muss" (p. 300) ("...although symbol may not, as in the case with the purely external and formal sign, be fully inadequate to the significance derived from it, yet, in order that it may retain his character as symbol, it must present an aspect that is strange to it"). Such a vagueness stems from the fundamental plurisemanticity of symbol, on both the form and the content sides. The image of a lion, for instance, though being usually a symbol of strength, is also endowed with other characters: and, conversely strength can be convincingly represented by a bull, or by its horns: therefore "symbol, by its own nature, is ambiguous" ("das Symbol seinem eigenem Begriff nach wesentlich zweideutig bleibt"). Hegel seems here very close to the aforementioned exegetic tradition. Thomas Aquinas, in fact, commenting on the difficulties in

interpreting the signs of the Scriptures, shows an analogous viewpoint (he, however, uses the work similitudo, instead of 'symbol'): "...non est propter defectum auctoritatus quo ex sensu spirituali non potest trahi efficax argumentum; sed ex ipsa natura similitudinis, in qua fundatur spiritualis sensus. Una enim res pluribus similis esse potest; unde non potest ab illa, quando in Scriptura sacra proponitur, procedi ad aliquam illarum determinate: sed est fallacia consequentis, verbi gratia leo propter aliquam similitudinem significat Christum et diabolum" (Thomas Aquinas, 1926:VII, 14, p. 275) ("It is not due to deficient authority that no compelling argument can be derived from the spiritual sense, this lies rather in the nature of the similitude in which the spiritual sense is founded. For one thing may have similitude to many; for which reason it is impossible to proceed from anything mentioned in the Scriptures to an unambiguous meaning. For instance the lion may mean the Lord because of one similitude and the Devil because of another"). Hegel, too, therefore, as Vico, departs from a Neoplatonic and mystical tradition, and reshapes it into a new and original pattern. The ambiguity and inadequacy of symbol is thus subsumed within a dialectical scheme, as a preliminary moment in a process leading to a synthesis in classic art: the mystery of the sphinx dissolves into the pure beauty of the Greek statues, images of the divine.

THE RADICAL METAPHOR

Besides this analogy in procedure, Vico and Hegel appear very close, though being quite independent in their solutions, in dealing with the issue of metaphor.

Hegel and Vico

According to the German philosopher, the symbol loses its natural ambiguity only when form is distinct from content and their relation is clearly expressed: this happens in the simile. In case such a dissociation appears in a less clear way, the figure is a metaphor: "...diese Trennung, obgleich an sich vorhanden, in der Metapher, noch nicht gesetz ist" (p. 390). In Vico's mind metaphor is the most luminous of the poetical tropes, because "it gives sense and passion to insensate things" ("alle cose insensate essa da' senso e passione") and, therefore, it is literally a "fable in brief" ("picciola favoletta"), similar to the myths, whereby the

primitive giants "pictured the sky to themselves as a great animated body, which in that aspect they called Jove... who meant to tell them something by the hiss of his bolts and the clap of his thunder" (p. 76) ("si finsero il cielo essere un gran corpo animato che per tale aspetto chiamarono Giove... che col fischio de' fulmini e col fragore de' tuoni volesse dir loro qualche cosa").

Vico's enthusiasm for such creative power of metaphor, however, is not shared by Hegel, who, in line with an ancient rhetoric tradition, underlines its decorative character; metaphor, insofar as it derives its meaning from the context, cannot assume the status of an independent artistic representation. (He does not like the illogical procedure of metaphor, that interrupts the normal flow of imagination and creates relations between elements, quite extraneous to one another.)

Herder and Schelling

One can easily realize how extraneous (as he himself often declared) Hegel was to the early Romantic movement, that, in agreement with Vico, viewed metaphor as the link between myth and language: in other words, language was conceived as a further product of the imaginative power that originated myths. Such an idea had already been expressed by Herder, who, in his essay Ueber den Ursprung der Sprache (1770), considered animism as the root of language and abstract thinking, and added that the languages of the Greek and Oriental peoples bore in themselves evidences of this phase in human history: "ihre ganze Mythologie liegt in den Fundgruben, den Verbis und Nominibus der alten Sprachen und das älteste Wörterbuch war so ein tonendes Pantheon..." (Herder, 1881; V: 53-54) ("Their whole mythology lies in those treasure troves, in Verbis and Nominibus of the ancient languages; and the earliest dictionary was thus a sounding pantheon...").

A strikingly similar opinion on this subject is expressed by F.W.J. Schelling, who, from several viewpoints, is quite remote from Herder. In his lectures later published in 1802, under the title Philosophie der Kunst, Schelling criticized the XVIII century naturalistic theories on the origin of language, resumed by Herder: a philosopher, he said, should be interested with the ideal, not the empirical, genesis of phenomena. In Schelling's Einleitung in die Philosophie der

Mythologie (1826), we read: "Aber welche Schätze von Poesie liegen in der Sprache an sich verborgen, die der Dichter nicht in sie legt, die er nur gleichsam hebt, aus ihr wie aus einer Schatzkammer, die er die Sprache nur beredet zu offenbaren... Beinahe ist man versucht zu sagen: die Sprache selbst sei nur die verblichene Mythologie, in ihr sei nur in abstrakten und formellen Unterschieden bewahrt, was die Mythologie noch in lebendigen und concreten bewahre." (Schelling, 1927:54) ("But what treasures of poetry lie hidden in language; and poet does not place them there, but just removes and brings them to light, as out of a treasury, or persuades language to reveal them... One is tempted to say that language itself be but a faded mythology, in which is preserved in abstract and formal distinctions what mythology still preserves in live and concrete ones."). Such distinctions are always cognitive models ("phantastic universals", in Vico's words) because in mythical thinking philosophy is also poetry at the same time: "In der Mythologie konnte nicht eine Philosophie wirken, welche die Gestalten erst bei der Poesie zu suchen hat, sondern diese Philosophie war selbst und wesentlich zugleich Poesie" (p. 54) ("in mythology there could not be a philosophy, that had to look for its forms in poetry, but such a philosophy was and at the same time poetry").

THE "PROPIE ALLEGORIE"

This framework, embracing philosophy and poetry in the forms of myth, reminds us of a passage of the Scienza nuova where Vico condenses his ideas on fables and language in the heroic age. At the end of the first chapter in the "Logica poetica," Vico, after dealing with the fantastic creations of the theological poets, affirms, by way of conclusion, that "le mitologie devono essere state i proprii parlari delle favole (che' tanto suona tal voce); talche', essendo le favole, come sopra si e' dimostrato, generi fantastici, le mitologie devono essere state le loro proprie allegorie" (p. 171) ("the mythologies, as their name indicates, must have been the proper languages of the fables; the fables being imaginative class concepts, as we have shown, the mythologies must have been the allegories corresponding to them" (p. 129 #403)). Here Vico charges the term 'allegory' with a quite idiosyncratic meaning: he interprets the Greek word ἀλληγορία as diversiloquium and refers it to predicating the same quality of different items and classes. The myth of Achilles is therefore a still imaginative way of formulating

an abstraction, namely, the concept of strength, common to all the strong persons. Myths, in fact, are the true meanings ("i propii parlari") of fabulous tales, whose sense is to be interpreted in a literal, not metaphoric, way; "talche' si' fatte allegorie debbono essere l'etimologie de' parlari poetici, che ne dessero le loro origini tutte univoche, come quelle de' parlari volgari lo sono piu' spesso analoghe. E ce ne giunse pure la diffinizione d'essa voce 'etimologia,' che suona lo stesso che veriloquium, siccome essa favola ci fu diffinita vera narratio" (p. 171) ("such that these allegories must be the etymologies of the poetic languages, which would make their origins all univocal, whereas those of the vulgar languages are more often analogous. We also have the definition of the word etymology itself as meaning veriloquium, just as fable was defined as vera narratio" (p. 128-9 #403)). In other words, myths constitute the true discourse ('etymology': ἔτυμος 'true' and λόγος 'discourse') on the origins of poetic language (i.e., of language tout court), and they adhere to the events narrated with the same immediate concreteness, wherewith the words of the heroic language adhere to things and bodies ("origini univoche"), without abstracting from things and referring to them in a merely analogical way (what is proper to vulgar idioms, in which the semantic relation is arbitrary and conventional).

CONCLUSION

Within this philosophy of myth (and language) Vico's use of the term 'allegory' may seem paradoxical because the meaning, he gives the word, is just opposite to the traditional one. When, in fact, almost a century later (1826), Schelling conceived a philosophy of mythology akin to Vico's, he felt the need to specify that "Die Mythologie ist nicht allegorisch, sie ist tautegorisch. Die Götter sind ihr wirklich existierende Wesen, die nicht etwas anderes sind, etwas anderes bedeuten, sondern nur das bedeuten was sie sind" (op. cit., pp. 195-6) ("Mythology is by no means allegorical, it is tautegorical. The gods are its real, living essence, and they are nothing else, they mean nothing else: they mean but what they are."). This expressive neologism, 'tautegorical', had been coined by S.T. Coleridge (always in reference to myth) in the same year he had read the Scienza nuova: "This part of the mythus in which symbol fades away into allegory but . . . never ceases wholly to be a symbol or tautegory."

We may conclude our research, in a Vichian way, with an interesting vicissitude of a word, that mirrors the constitutive ambiguity of symbol, highlighted above. 'Allegory,' devoid of its original meaning, referred, in Vico, to a philosophy (of myth and language) that opposed its previous use; paradoxically, the first who fully understood and creatively elaborated that philosophy (namely, Coleridge and Schelling), turned the word, so to say, upside down (i.e., 'tautegory') thus overturning (and preserving) the contradiction. Here too πόλεμος πάντων μὲν πατήρ ἐστι, πάντων δὲ βασιλεύς. ("War is the father of all things, the king of all things").

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SOCIAL SYMBOLS AND CULTURAL IDENTITY

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1) Theoretical Approach of the Sign

Cultural identity can only be grasped in a unitary form if it is considered as integrated by a group of cultural sectors all of them related by a common link: human communication and interaction. Only through the sign analysis, in its vertical slope, will it be possible to define and distinguish the cultural differences and similarities.

In order to establish the need of the semiological analysis that may allow us to lay out the cultural features that will distinguish the identity of a society, especially of a frontier community, we start from a basic principle: "Symbols come from reality, they are its reflection and influence it". This is how the symbolic systems give the image that the members of that system have made out about the world and, specifically, about the cultural system; symbols affect reality because their elements, their specific codes, place men in the plane of the world that they or their ancestors have outlined and the symbols established allow them to guide their actions in that world. But, in order to be able to understand the importance of symbols, it is necessary that we start from the deep and integral approach that the study of reality gives considering it as conceived in our Seminar. The advantage of the tridimensional simultaneous conception (syntactic, semantic and pragmatic) and the bipolar one (the "entelechiál" or structural and the "real" or functional) that we have analyzed in the Seminar, is that it covers all the accepted relations of the sign and makes evident the distinction between the factive and the non-factive. From this

conception of the sign, its two planes and three axis stand out, for the sociological study of reality, the pragmatic slope, which as a "real" part of semiology can be identified with one portion of sociology, if conceived as the dimension in charge of the relation between signs and their users, or otherwise considered, between society members and the significantants that they only use and that make social interaction and communication possible.

For a correct analysis of the sign, whether linguistic, logic or sociological expression, we must also start from the consideration that "in the background of the sign problem, there is always an experience-expression relation". The experience carries along a knowledge which in its turn gives place to different kinds of expressions. This knowledge can be common to several individuals or there can also exist the fact of different individual experiences converging in a collective one.

In both cases, the significantants (languages and social symbols) contribute to collectivize or to make common the individual experiences when communicating them and making them sharable, as well as to diversify common experiences when laying them out in rational terms and thus revealing that what was assumed to have been shared, in fact was not lived in the same way.

We have seen the need of considering the experience-expression relation, as well as the fact that the individual is included in society and that is why he has a double experience: the objective and the subjective. We could add that through interacting we come to form another experience: the intersubjective, which will be the one to establish and explain the social symbols, specially in regard to their sense.

2) Characteristics of Social Symbols

For the correct interpretation of social symbols in relation to the problem of identity, it is convenient to take into consideration some of the main features of these forms of communication and social identification.

a) The first and main characteristic of the symbol is its reality as a "vehicle" or tool that will make it possible that both the emitter subjects or promulgators and the receivers or interpreters, participate directly in the contents

symbolized, as long as they come from the same cultural groups and as members of the same group, they share a similar worldvision. In close relation to this characteristic, its opposite pole should be mentioned, that is, that the symbol is in its turn only a sign of a particular type and as such it comes to have a rational and natural character, as Guiraud considers signs like a representation of the natural characters of reality.

b) Another of the characteristics of the symbol is found in its nature itself, as it discloses and hides at the same time, or otherwise expressed: the symbol allows us to know or to indicate only part of what it is meaning and thus it is hiding another part of its content; nevertheless, when the members of a society share one cultural content, when the worldvision is similar and there is a democratic communication, what the symbol hides and what it reveals is perfectly understandable for all the members and the participation in the cultural identity might become complete. But, it is necessary to consider that the global society is integrated by a large number of groups, amongst which there is not always the possibility of joint participation, nor is the correct communication produced for all of them in order to make this participation possible in the cultural contents, which will explain that symbols can also prevent or hinder the participation and the symbolic interaction.

c) Another of the typical characteristics of social symbols is their special variability determined by: a) the existence of different forms of sociability within each global society and of different depth levels in each form; b) on account of the presence of the factor time that makes the already established symbols vary as to their forms of representation and their contents; c) because of the presence or appearance of social joint situations (wars, social concerns, economic crisis, natural catastrophes) and their consequences that cause the appearance of singular and unpremeditated symbols, which cause the temporal or permanent variation or modification of the existing ones.

d) Gurvitch, as well as Giraud, coincide in giving social symbols the characteristics of being vehicles of social identification and to carry along the three aspects of human behaviour, according to Gurvitch, and of logic and aesthetic signalization, according to Giraud. To this, we could add that when we refer to social symbols we must accept

their quality of being included in a continuum that goes within the scope of representation: from the strictly iconic to the completely symbolic as the symbol can either have one or different meanings which are determined by the conditions in which a symbol can be applied to something, the adaptation in which a symbol makes reference to something and its use, determined by the social and psychological conditions in which its use is allowed, prescribed or proscribed. The continuum is not only produced in the plane of significative representation, but it can also be applied to different levels of meaning that the symbol acquires in its relation with the intersubjective experience and with the planes of the real and entelechial disciplines, so the continuum in the sociological axis, which is the one we are now considering, becomes evident as to the fact that the social symbol has a frame of uses and customs. The uses and customs have an institutional frame and the institutions are produced and work within the frame of global society.

3) Social Symbols and Frontier Society

The different typical characteristics of the social symbols that we have listed in the previous paragraphs, will allow us to understand and to explain the symbolic behaviour of the groups subject to social transitional pressures, as could be the case of the frontier inhabitants between countries of different development levels, who are in a constant confrontation with their cultural patterns.

The situations produced in the social interaction in the societies or communities that demand a constant adaptation of its structures to the new, unknown and changing situations that require the search of new directions, some of them unprecedented and unpredictable, that will favour the traditional models, expressed through their social symbols, may become sometimes either inoperative or inefficient. The immediate consequence will be expressed through the need of: a) adapting them to the new intersubjective experiences; b) to create new ones, that substitute the ones that can no longer identify them among themselves, or, in the most comfortable situations, to adopt those coming from the strongest society, both socially and economically speaking, which will impose these symbols through its technological hegemony.

The behavior of this effervescent society, is probably

due to a mixture of the possibilities mentioned before and not only because of the exaltation of only one of the forms. Thus, the analysis of social symbols can face us with a continuum that will go from the existence of the traditional and common symbols of the whole Mexican society up to the finding of unprecedented cultural symbols of national culture, going through those that may allow us to identify the different subcultures forming the national social reality in its ethnic and socio-economic conformation. The use of the multiple symbolic sphere and, probably, a changing one, will be the factor that will determine and encourage a new cultural identity, the one common to the inhabitants of the frontier zone that will identify them as participants of the different cultures that make up their social reality.

3.1. Symbolic Cores to be Considered in the Baja Californian Society

The cultural identity that we were trying to find out through our research project, will be placed in one of different points along the scale which shapes the symbolic continuum. In order to determine the place or places of the scale corresponding to different degrees of cultural identity, it will be necessary to investigate some of the most representative symbolic cores of the social reality in which we are interested.

Signs, according to Giraud, cover two great titles: the signs of identity and the signs of politeness. To be able to identify the degrees of cultural identity we will outline, among the first ones, those that may allow us to express the organization of society, specially the belonging to groups or subgroups. Accordingly, we will speak about: a) personal way of dressing up, (clothes, make up and hair style) that may allow us to identify their carriers as members of different cultural and social groups. The level of degree of cultural identity can be reflected through clothing and the way of personal dressing up which, in transitional societies, acquire special importance in the sociological scope, where the differentiation starting from these symbols give a certain class in which the members of a certain socio-economic group reject the use of certain garments, of certain hair styles and make ups; to accept them would make them feel confused with individuals considered as belonging to a lower or different subculture, with which they do not want to be

identified, as they consider that their social and economic position could be affected by an assumed deviation of the cultural standards and patterns typical of their group.

Identity signs represent permanent relations that go along with the special transitional relations that may vary according to the individuals that are present and to circumstances. They are also pointing out the existence of social interrelations and interactions. They are: Politeness signs, which for an identity study can, without any doubt, contribute with valuable indicators but its observance and determination require a specialized research that goes beyond the possibilities presented in our project. From the politeness signs--voice tone, greetings, offenses, proxemic kinesics and food--this last concept will be considered as typical for this group of identity signs. Although the author we are taking as a guide for the selection of social symbols considers food as one of the politeness symbols, for us it represents the social symbol which is nearer to the identity signs than to the politeness ones. According to him, the politeness signs are mainly characterized by being formed by corporal and gesticulation attributes. However, food is one of the important ways of the identification of the group, of social and cultural status and varies from one culture to another, presenting differences notably regional from the cultural features of each place, as well as from the natural and weather conditions and, consequently, from the farm and cattle raising situations. This type of social symbol is often surrounded by a rigid conventionalism system as to the preparation of food, standards ruling the table service and the behavior when eating.

b) A third level of social symbols is the one that Giraud calls "the codes", which is typical for being the expression of different kinds of social communication that is integrated by the identity and politeness signs according to our sociological expression. Giraud's codes represent some of the different types of social interaction that find out their expression through signals, symbols and signs.

The author distinguishes four main types of what he calls social life of interaction: a) Protocols, which have as a role to establish the communication between individuals and that are integrated through the already mentioned identity and politeness signs; b) Games, that can be private, individual, public or collective such as the representations

of a social situation; c) Rites or rituals, in which the emitter is the same cultural group and d) Fashions, which are the stylized and individualized forms of codes. The two last aspects are of great interest for the analysis of cultural identity, due to their direct relation to the cultural aspect.

Interrelation in rites is established between the group and the individual. Its basic function is to encourage the communion and solidarity of the individuals regarding the standards and responsibilities of different types, but mainly those of transcendental, moral and national character.

Among the rites in which we are interested, are those belonging to the religious cult, as it is through religious participation that the individual identifies and relates himself with those sharing his own faith, but at the same time the participation in the rite gives social status and backs the belonging to a certain social group. The observation of religious rites does not only confirm the traditional patterns, but it also keeps family links and increases the feeling of belonging to a native land, to a village, to the place of common origin. Pilgrimages to places considered as traditional centers, travels to fulfill the "payment of promises" and the "offers to the saints" are ritual and symbolic ways to stay together to a divinity and, through it, to the traditional aspect and to national roots.

c) The third social code of Giraud, is one that he calls fashion and which covers the signs of individual identity (clothes, make up, way of dressing up), and social signs of material and cultural type (employment and use of luxury articles or consumers goods, sports, artistic and literary likings). Fashion acquires a special importance in societies of a high degree of technological development with a superabundance of consumers goods that encourage and require their constant change for the last model; owning and enjoying them means to belong to a higher and more prestiged socio-economic stratum.

The fashion, as an expression of a style of life, of a social code, carries along, simultaneously, the separatist and unifying tendency; as a social fact, it is mainly characterized for its variability and for its possibility of having social pressure on the members of every social group. Its ephemeral nature gives it a dynamic feature "that it can

only be the sign of a class during a very short period of time in which it is neither too new nor too old" (Goblot, 1923). Its restrictive character is expressed through the social pressure that it has on individuals who feel urged to follow its plans as long as they want, through this submission, to identify with their social group or, to separate from it, adopting the signs of the fashion of another group to which they want to integrate. The different authors that have written on this social fact, outline its dominating character and thus it is even stated that "at least in certain surroundings, the judgement on fashion is more imperative than the judgement on moral" (Goblot, 1923). For the empirical study of fashion we have to take into consideration that it forms the background of customs and that in fashion there is the tendency to crystallize, to institutionalize in order to become a custom. It is difficult to define the distinction between both concepts; nevertheless, we will have to start from the degree of the pressures and how long each one of them lasts in order to be able to distinguish them in the scope of empirical work.

From the operative point of view we will resort, for the study of the symbolic sphere, to the research of the symbolic cores in the Baja Californian society. From these cores, those more directly related to the cultural frontier are the identifying symbols expressed through: the personal way of dressing up and food, codes or social symbols of which we will refer to rituals, with special mention to the religious cult and to fashion, this last one on its widest implication of an identifying symbol of the individual and social aspects.

To change each social symbol into its corresponding indicator or groups of indicators, will be the work to be attained from the concepts that have been formulated in this theoretical framework and from the suggestions that are gathered during the observance and impregnation stage in the Baja Californian society itself.

XII. FOUNDATIONS OF OLD TESTAMENT STRUCTURE AND MEANING

MATRILINEAL BACKGROUND OF GENEALOGIES IN GENESIS

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0.1 Biblical scholars have long struggled with the problems of kinship and inheritance as expressed in the formal genealogies and narratives of Genesis. One barrier to clarification of the problems has been the nature of the document itself. Additional problems have been generated by the bias of the analysts, a factor only recognized in recent years.

0.11 Genesis as we know it today is the product of the compilation of several oral traditions, of several redactions, of several translations, and of nearly a thousand years of recopying crumbling parchment. The potential for deletion, inclusion, inversion, copy error, and mistranslation are beyond the wildest nightmares of any modern editor. The earliest complete copies available for study date to about 100-200 CE and are in Aramaic and Greek. Fragments of older copies exist, and Genesis is believed to have existed as a formal document at least as early as about 700 BCE, and possibly several centuries earlier (Pfeiffer, 1941:71-126). It is only reasonable to assume that those earliest copies differed in a great many respects from any available today.

0.12 Cultural bias on the part of the analysts is generated naturally by their cultures. We live in a culture that recognizes kinship bilaterally, with a strong tradition of masculine bias. Both patrilineal and matrilineal systems differ radically from our own in the determination of sanguinal and affinal kinship. Figures 1, 2, and 3 diagram sanguinal kin relationships in bilateral, patrilineal, and matrilineal systems. Black symbols are used for sanguines to Ego. Ego's offspring are of the primary lineage. If Ego is a male in a

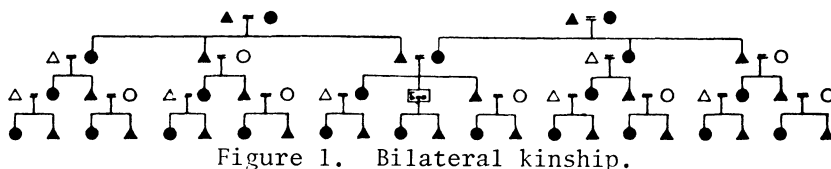


Figure 1. Bilateral kinship.

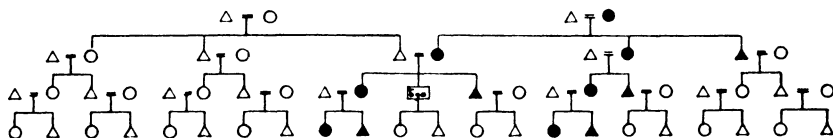


Figure 2. Matrilineal kinship.

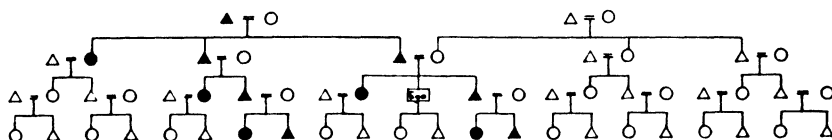


Figure 3. Patrilineal kinship.

patrilineal system, his offspring are sanguinal kin, but the offspring of a female Ego in this system are her affines (in-laws). The opposite is true in matrilineal systems.

0.13 Structural analysis allows the bias of the analyst to be reduced to minimal importance by the establishment of unbiased patterns. Errors and changes can then be detected as flaws in the system of pattern.

1.1 The functions of kinship systems within a society include provision for the reproduction and protection of offspring, regulation of sexual behavior, legitimation of authority, establishment of mechanisms by which authority passes from one individual to another, formation of economic units, and establishment of formal alliances between economic units (Needham, 1972). Alliances between kin groups may provide the basis for trade and/or mutual protection. Albright (1963) cites extensive evidence for adoption and other kin alliances to provide financing for trade. In addition,

archaeological evidence for trade between Mesopotamia and Egypt dates back into prehistory, at least as early as ca. 4000 BCE (Clark, 1977). Alliances with the powerful along trade routes would provide protection for caravans and outlets for goods. Marriage, as a long term set of kinship obligations, would be preferable to adoption for both purposes. Such kin alliances would naturally include members of the local variants of the overall culture extending from Mesopotamia to Egypt, bringing together the traditions and genealogies of many groups. One task of the early redactors was to interweave the mosaic of traditions, inserting genealogies to provide the common knowledge necessary as background to the narratives. Thus, traces of many traditions are to be found within Genesis.

1.2 Several "documentary" sources are usually identified for Genesis. These are identified by writing style, language variation, and the use of Yahweh or Elohim to refer to the deity. In addition, it is supposed that at least two redactions were made. "J" and "E" refer to sources, "JE" and "p" to redactors (Carpenter, 1902).

1.3 While the persons named in Genesis may have had no existence as individuals outside the minds of the narrators and redactors, their treatment is as real individuals. Thus their kinship behavior should reflect the ideal of the cultures generating them. This study suggests that one or more of the redactors imposed prevailing kinship norms on earlier narratives and genealogies.

1.4 Historically, many of the settled peoples of the area adhered to paired male and female deities. Although the theology varied from place to place, the feminine deity was generally identified with constancy and fertility of the soil, while the masculine deity was identified with animal husbandry or hunting and with a cycle of death and rebirth coincident with the annual cycle (Barton, 1916). Authority resided most strongly in the male figure, but was ultimately derived from his relationship to the female, either as husband or son. A matrilineal system, in which the lineage represents constancy while the men represent cyclic transfers of authority, would repeat the pattern established by the deities. Thus, both myth and history exhibit both linear and cyclic phenomena. The antiquity of these historic peoples is great enough to suppose some congruence with the early Hebrews. Indeed, some of the traditions included in Genesis may derive from the same source.

2.1 The structure of kinship in Genesis is generally viewed as patrilineal with primogeniture (possibly modified by dedication of the first-born to the deity) determining inheritance of authority. This position must be regarded with some caution, however, because (1) there is no clearly stated instance of a first-born inheriting in Genesis and (2) it is not first-born sons who are depicted in ritualized sacrifice or dedication. Cain is the first-born of Eve, while the second-born Abel is slain. In a patrilineal system, Ishmael rather than Isaac is the first-born of Abraham, but it is Isaac who is involved in the Akeda (ritual sacrifice). In Exodus, it is the offspring of Levi, third-born of Jacob and Leah, who are dedicated to the priesthood. Figures 4, 5, and 6 indicate inheritance in various systems.

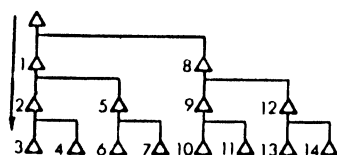


Figure 4. Primogeniture in patrilineal patriarchy.

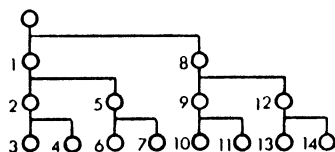


Figure 5. Primogeniture in matrilineal matriarchy.

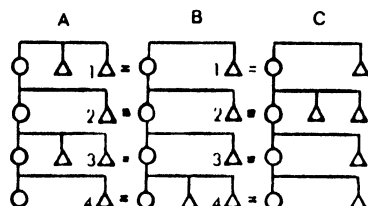


Figure 6. Avuncular inheritance in matrilineal connubium.

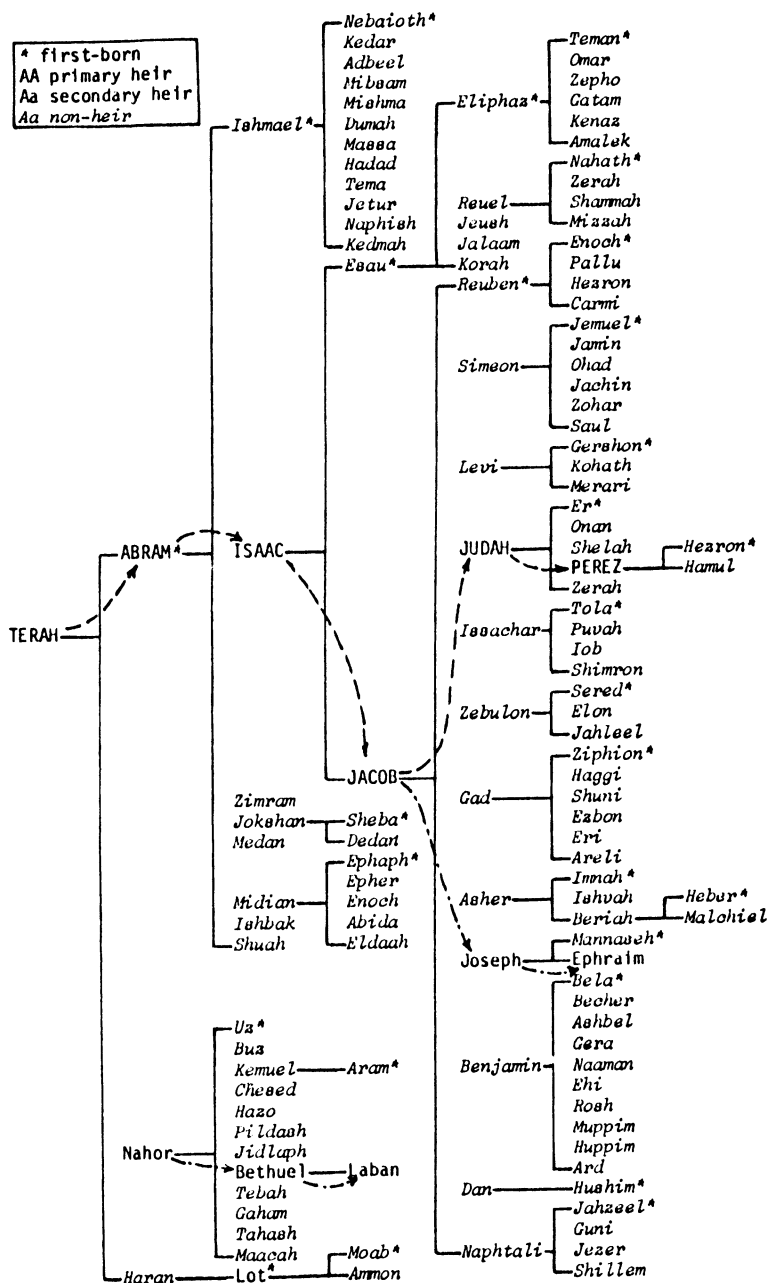


Figure 7: Men and Heirs in Genesis 12-20

2.2 The line of inheritance from Terah to the sons of Judah presents a random pattern when diagrammed using males alone (Figure 7). Inheritance passes from Terah to Abram (birth order not clearly stated) to Isaac (second son) to Jacob (second son) to Judah (fourth son) to Perez (technically fifth son). If a rule of primogeniture were strictly applied, Isaac would be fourteenth in line at Abraham's death, Jacob seventeenth at Isaac's death, and Judah seventeenth at Jacob's death. The inevitable conclusion is that primogeniture was not the rule.

2.31 A large part of the Genesis narrative is devoted to explaining why the first-born sons do not inherit. Ishmael is cast out (1) due to his mother's attitude toward her mistress Sarah:

And he cohabited with Hagar and she conceived; and when she saw that she had conceived, her mistress was lowered in her esteem. And Sarai said to Abram, 'The wrong done me is your fault! I myself gave my maid into your bosom; now that she sees that she is pregnant, I am lowered in her esteem. The Lord decide between you and me!' Abram said to Sarai, 'Your maid is in your hands. Deal with her as you think right.' Then Sarai treated her harshly, and she ran away from her. (16:4-6)

and (2) due to his own relationship with Sarah's son Isaac:

Sarah saw the son, whom Hagar the Egyptian had borne to Abraham, playing. She said to Abraham, 'Cast out that slavewoman and her son, for the son of that slave shall not share in the inheritance with my son Isaac. (21:9-10)

The Hebrew uses the word "playing" as a word play on "Isaac". This has been variously construed as having sexual overtones, implications of teasing, and so on. Whatever the exact meaning intended by the author, the word-play suggests that Sarah did not approve of the relationship.

2.32 Esau loses his birthright (1) by selling it to his brother Jacob for a mess of lentil stew:

Once when Jacob was cooking a stew, Esau came in from the open, famished. And Esau said to Jacob, 'Give me some of that red stuff to gulp down, for I am famished' --which is why he was named Edom. Jacob said, 'First

sell me your birthright.' And Esau said, 'I am at the point of death, so of what use is my birthright to me?' But Jacob said, 'Swear to me first.' So he swore to him, and sold his birthright to Jacob. Jacob then gave Esau bread and lentil stew; and he ate, drank, rose, and went his way. Thus did Esau spurn the birthright. (25:29-34).

- (2) by the deception of Isaac and Rebekah by Jacob (27:1-40), and (3) by his marriage to inappropriate women:

When Esau was forty years old, he took to wife Judith daughter of Beeri the Hittite, and Basemath daughter of Elon the Hittite; and they were a source of bitterness to Isaac and Rebekah. (26:34-35)

Rebekah said to Isaac, 'I am disgusted with my life because of the Hittite women. If Jacob marries a Hittite woman like these, from among the native women, what good will life be to me?' So Isaac sent for Jacob and blessed him. He instructed him, saying, 'You shall not take a wife from among the Canaanite women. Up, go to Paddan-aram, to the house of Bethuel, your mother's father, and take a wife there from among the daughters of Laban, your mother's brother.' (28:1-2)

When Esau saw that Isaac had blessed Jacob and sent him off to Paddan-aram to take a wife there, charging him, as he blessed him, 'You shall not take a wife from among the Canaanite women,' and that Jacob had obeyed his father and mother and gone to Paddan-aram, Esau realized that Canaanite women displeased his father Isaac. So Esau went to Ishmael and took to wife, in addition to the wives he had, Mahalath the daughter of Ishmael son of Abraham, sister of Nebaioth. (28:6-9)

- 2.33 Reuben, first-born of Jacob, enters a forbidden relationship with Bilhah, his father's wife, resulting in his disinheritance.

While Israel stayed in that land, Reuben went and lay with Bilhah, his father's concubine; and Israel found out. (35:22a)

'Reuben, you are my first-born, my might and first fruit of my vigor, Exceeding in rank and exceeding in honor.

Unstable as water, you shall excel no longer; For when you mounted your father's bed, You brought disgrace-- my couch he mounted!' (49:3-4)

2.34 Simeon and Levi, the second and third sons of Joseph are disinherited for their part in the killing of Shechem, the potential husband of their sister Dinah.

On the third day, when they were in pain, Simeon and Levi, two of Jacob's sons, brothers of Dinah, took each his sword, came upon the city unmolested, and slew all the males. They put Hamor and his son Shechem to the sword, took Dinah out of Shechem's house, and went away. (34:25-36)

'Simeon and Levi are a pair; their weapons are tools of lawlessness. Let not my person enter their council; or my being be joined to their company. For when angry they slay men, and when pleased they maim oxen. Cursed by their anger so fierce, and their wrath so relentless. I will divide them in Jacob, scatter them in Israel.' (49:5-7)

2.35 Judah's son Perez is favored over Shelah, an older son by his first wife, and also overcomes his twin, Zerah, during the birth process:

When the time came for her to give birth, there were twins in her womb! While she was in labor, one of them put out his hand, and the midwife tied a crimson thread on that hand, to signify: This one came out first. But just then he drew back his hand, and out came his brother; and she said, 'What a breach you have made for yourself!' So he was named Perez. Afterwards his brother came out, on whose hand was the crimson thread; he was named Zerah. (38:27-30)

2.36 Manasseh and Ephraim are exchanged by the "mistaken" blessing of Israel:

Joseph took the two of them, Ephraim with his right hand --to Israel's left--and Manasseh with his left hand--to Israel's right--and brought them close to him. But Israel stretched out his right hand and laid it on Ephraim's head, though he was the younger, and his left hand on Manasseh's head--although Manasseh was the first-

born...When Joseph saw that his father was placing his right hand on Ephraim's head, he thought it was wrong; so he took hold of his father's hand to move it from Ephraim's head to Manasseh's. 'Not so, Father,' Joseph said to his father, 'for the other is the first-born; place your right hand on his head.' But his father objected, saying, 'I know, my son, I know. He too shall be great. Yet his younger brother shall be greater than he, and his offspring shall be plentiful enough for nations.'...Thus he put Ephraim before Manasseh. (48:13-14, 17-19, 20b)

2.37 The first-born of Nahor and Milcah is listed as Uz (22:21), but of that sibling group, only Bethuel is later mentioned. No narrative explanation is offered.

2.4 In most instances, the loss of inheritance is directly related to some relationship with women. Ishmael has the "wrong" mother, Esau takes the "wrong" wives, and Reuben lies with the "wrong" woman. Simeon and Levi deprive their sister of offspring by slaying, not only her potential husband, but every man who might have acted as levirate husband. The elder sons of Judah (Er, Onan, and Shelah) may have been inappropriate husbands to Tamar because they had the "wrong" mother, but it is a less clearly stated relationship. If relationship with women directly affect inheritance on a secondary level, is it not possible that the relationships are the prime factor in determining inheritance? Figure 8 depicts the women of Genesis together with the male heirs. The positions indicated are drawn from the formal genealogies, from clear narrative statements, and from implications inherent in the pattern itself. Stated relationships are shown as solid lines, relationships implied from the narrative are shown as dotted lines. It should be noted that both mother and wife are important in determining inheritance and that the position of the wife along her lineage outweighs the generational position of the husband. A minor change in the gender of one individual allows the full pattern to emerge.

3.1 There are several lines of evidence supporting the change of gender of Bethuel.

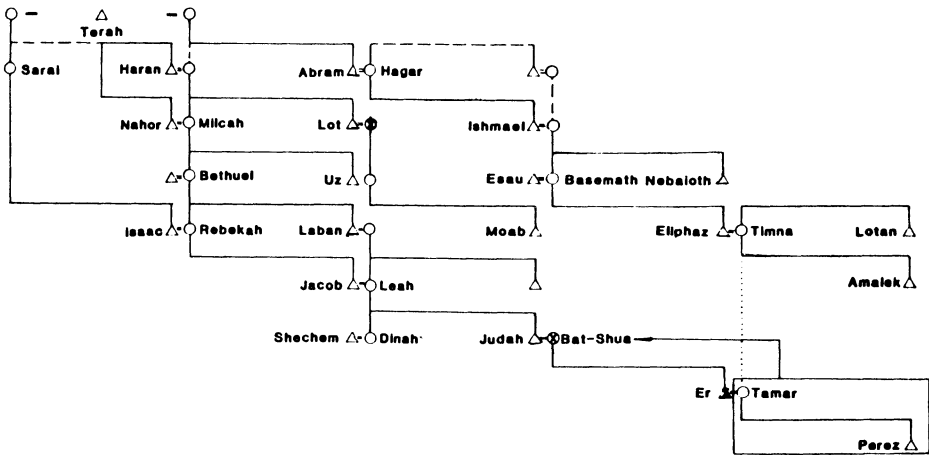


Figure 8. Women and heirs in Genesis, 12-50.

3.11 The narrative surrounding the negotiations leading to the marriage of Isaac and Rebekah contains several problematic statements that become less troublesome if Bethuel is the mother of Rebekah. In 24:28, Rebekah, "ran and told all this to *her mother's household*" (emphasis added). In 24:50, Laban and Bethuel answer the servant, but in 24:55, "her brother and her mother" speak. Plaut (1974:234, FN) says,

Bethuel. Some believe that the name was added later and that the story reads more easily if we assume that Laban acted as head of the family because Bethuel had already died. It is more likely, however, that this is a trace of an earlier societal pattern in which the 'mother's household'...played a sizable role.

Vawter (1977:273) conjectures that Genesis 24:50 should read "Laban and his household" rather than Laban and Bethuel, i.e. *betho* rather than *bethuel*. The identity of Bethuel is further called into question by the reference to Laban as the son of Nahor in 29:6.

3.12 The genealogy of the Arameans in 22:20-24 which contains the first reference to Bethuel and Rebekeh, is internally inconsistent and also inconsistent with the patterns established in the many other genealogies.

Some time later, Abraham was told, 'Milcah too has borne children to your brother Nahor: Uz the first-born, and

Buz his brother, and Kemuel the father of Aram; and Chesed, Hazo, Pildash, Jidlaph and Bethuel'--Bethuel being the father of Rebekeh. These eight Milcah bore to Nahor, Abraham's brother. And his concubine, whose name was Reumah, also bore children: Tebah, Gaham, Tahash, and Maacah.

In the similar genealogy of Genesis 46, both the offspring and their children are totalled for each wife:

Gad's sons: Ziphion, Haggi, Shuni, Ezbon, Eri, Arodi, and Areli. Asher's sons: Imnah, Ishvah, Ishvi, and Beriah, and their sister Serah. Beriah's sons: Heber and Malchiel. These were the descendants of Zilpah, whom Laban had given to his daughter Leah. These she bore to Jacob--16 persons.

Genesis 22 and 46 are most easily compared as they both attribute the offspring to the wives and state the number of offspring. However, in 25, twelve sons of Ishmael are listed and the number twelve is stated: in 35, twelve sons are listed for Jacob and the number twelve is stated; and in 36, the offspring are attributed to the wives, but no numbers are stated. Thus, in four of the genealogies, both names and numbers are stated. Only in the Aramean genealogy do the number of names and the stated number of offspring disagree. This suggests that additions were made to this list after it was formalized. It is likely that the reference to Bethuel as father of Rebekah is an inclusion. Its style is that of an explanatory note. The second inclusion is less evident, but Aram is the more likely candidate. However, the style in which Aram is presented differs from the style in which Rebekah is presented. Thus, the internal inconsistencies are of both number and style, suggesting strongly that some additions were made after formalization of the text. The "original" may have read:

'Milcah too has borne children to your brother Nahor: Uz the first-born, and Buz his brother, and Kemuel was the sister of Uz; and Chesed, Hazo, Pildash, Jidlaph, and their sister Bethuel.'

With this reading, there are eight offspring named, rather than ten as above, and the total of twelve is consistent with 25 and 35.

3.13 The present spelling of Bethuel (בְּתוּאֵל) is consistent with feminine forms such as Bethulah (בְּתוּלָה, virgin or maiden) and Bath (בַּת, daughter). El (אֵל) is translated as God. (See Ben Abba 1978:8,30; Genesis 36:25; 46:15.) The name Bethuel, then, might be translated as "maiden of God," or "daughter of God." While the masculine or feminine qualities of a name may change over time, the vocalization of Hebrew names assigns gender. If Bethuel was a male in the "original" version, why was his name given feminine vocalization? The gender stated within the narrative and the vocalization are inconsistent with each other.

3.2 The matrilineal structure is further supported by many other references within the Genesis narratives:

3.21 Most offspring are named by the mother and/or midwife (Genesis 4:1; 16:11; 29:32-35; 30:6-8, 10-13, 17-21, 23-24; 35:18). Plaut (1974:129, FN) says, "Traces of a metronymic society appear in various parts of the Bible, e.g., it is usually the mothers rather than fathers..." This implies that the mother has some authority to determine the child's future.

3.22 In Genesis 24:28, Rebekah told "*her mother's household*" and in 24:67, "Isaac brought her into *the tent of his mother Sarah*..." Each of these statements implies some degree of authority over the residence, if not over the household as a whole.

3.23 In several instances, women are shown as having authority over their handmaids, including the right to name and claim their offspring as their own. Sarah gives Hagar to Abraham, and Bilhah and Zilpah are given to Jacob by Leah and Rachel. More importantly, these actions are taken by women to ensure *themselves* offspring, not to provide offspring to their husbands.

And Sarai said to Abram, 'See the Lord has kept me from bearing. Consort with my maid; perhaps *I shall have a son through her*.' And Abram heeded Sarai's request. (Emphasis added.) --Genesis 16:2

...and Rachel said to Jacob, 'Give me children, or I shall die.' Jacob was incensed at Rachel, and said, 'Can I take the place of God, who has denied you fruit of the womb?' She said, 'Here is my maid Bilhah. Consort with her that *she may bear on my knees and that*

through her I too may have children.' (Emphasis added.)
--Genesis 20:1-3.

4.1 The matrilineal structure may also redefine several other problem relationships presented in Genesis:

4.11 The brother/sister relationship of Sarah and Abraham (12,20) does not make marriage between them tabu if the system is matrilineal and they do not share a mother. Plaut (1974:129) says,

It is possible that this latter notation reflects a stage of civilization in which descent was traced through the mother and marriages between offspring of the same father (but not the same mother) were permissible.

4.12 The sibling relationship cited in the very similar story of Isaac and Rebekah (26:7-11) is unclear in patrilineal terms and it is supposed that Isaac was acting fraudulently. However, under the system shown in figure 8, they appear to stand in much the same relationship as Abraham and Sarah. Sarah and Isaac are members of a lineage that stands in an affinal relationship to the lineage in which Abraham and Rebekeh are members.

4.13 The "incestuous" relationship between Lot and his daughters (19:30-38) is not illicit under a matrilineal rule. Indeed, if the sons-in-laws who died at Sodom were his nephews and heirs, and given that his own wife is dead, it is his obligation to actuate the levirate. The daughters are acting in their own behalves: "'Come, let us make our father drink wine, and let us lie with him, *that we may maintain life through our father.*'" (Emphasis added)"

4.2 Other narratives that deserve closer scrutiny with matrilineal relationships in mind include (1) Dinah and Shechem (34), (2) the wives of Esau, and (3) Judah and Tamar (38).

5.1 The theory that Bethuel's gender was "changed" by a late redaction requires justification in terms of the history of the document itself. If, as is generally accepted, Genesis has undergone several redactions, the motive for the change is most likely to lie with a redactor whose primary interest was in establishing lineages for some definite pur-

pose and during a time frame when patrilineal descent had become the rule. Of the many possible motives, the justification of some kingship over Israel seems the most likely. Unification of the twelve tribes could be accomplished as easily with affinal and sanguinal relationships, gender of the common ancestor is unimportant. However, kingship requires that authority over each of the tribes be vested in the king through legitimate lines of descent. While inheritance by the major characters of Genesis is justified by the narrative, Bethuel is a relatively minor character whose gender could be altered more easily than could narrative justifications be found.

5.2 I suggest, therefore, that a redaction was made during a period when matrilineal kinship was the rule, that this redaction placed emphasis on the matrilineal descent of authority to some king, and that this redaction was fairly early. A later redaction, again to justify some king, was made when patrilineal descent was being used and much of the justifying narrative included and gender established at this time.

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0. Introduction

0.11 Two general concerns direct this paper. The first is the potential convergence between the sociological analysis of Israelite society and the literary-structural analysis of Old Testament texts. Past Old Testament study has been too much a juxtaposition of naive historiography with naive literary technique; this, at least has been a widespread recent judgment. But rethinking in these two areas has proceeded, till now, along separate paths. Traditional historiography has been challenged from the side of the new archaeology and sociology, traditional literary criticism by the development of synchronic literary methods. Can these lines be made to converge by means of a theory of how social structures are deposited in literary structures?

0.12 Norman K. Gottwald¹ speculates that an initial point of convergence may be found in social psychology, and it is this suggestion that I am exploring. For last year's centennial program of the Society of Biblical Literature I prepared an analysis of certain texts, especially Num. 32 and Jos. 22, which deal with Israelite settlement in Transjordan.² I asked the question -- a social-psychological question -- of what attitude is inscribed in these texts to the idea or the possibility of Israelites living in Transjordan. My main conclusion was that the attitude is ambiguous. The legitimacy of Israel's title to Transjordanian territory is strongly affirmed, which implies that it is right for Israelites to live there,

while at the same time the sense is expressed that such Israelites are of inferior or even dubious status. More speculatively, I noted an obsession with issues of precedence between Cis- and Transjordanian Israelites, perhaps related to concern about origins; and another obsession with Transjordanian women as a potential source of social conflict, so that, for instance, it is meritorious to marry a Transjordanian virgin and bring her West, into Cisjordan.

0.13 The Jephthah cycle received little attention in that paper, but I have since perceived that the literary-sociological model there laid out provides an extraordinarily useful frame of reference for understanding this cycle (Judg. 10:6-12:7). For the present paper I confine myself to 11:12-28, Jephthah's negotiations with the king of the Ammonites. The analysis is mainly literary, but I hope the sociological-political dimension will be apparent.

0.2 My second concern, which lies within the area of literary structural analysis, is the relation between what I may call a constructive and a deconstructive reading. I hope this is a false issue, but it seems to me that, in biblical studies at least, structural analysts have not listened sufficiently to the deconstructionists. The structures of sense-making are the structures of not-making-ultimate-sense. Lévi-Strauss, as well as Derrida, teaches us that! Admittedly the deconstructionists are not usually precise enough about structure. But are not the text's construction and destruction of meaning-systems always in dialectical relationship? In this paper I attempt a constructive reading of the sense the text strives to make, and a deconstructive reading of the subversion of this meaning by the text itself. Jephthah, whom I take to express an Israelite "mind-set," makes a rather good case, and structural analysis can demonstrate how he does it. But his arguments do not finally hold water, and it is precisely this failure to hold water which seems to me to be structurally related to Israelite political realities and social-psychological attitudes.

1. Constructive reading

1.1 11:12-28 is part of a larger story which submits

easily to Proppian analysis. The Ammonites (or their king) are the villain, creating a problem-situation for Israel (or Gilead.) The services of Jephthah are secured in a classic finding-the-hero sequence (11:1-11). Our verses 12-28 present a verbal combat preliminary to the main combat. The Ammonites possess a powerful weapon, namely a legal claim to Israel's Transjordanian land, of which it is necessary to disarm them. This is precisely what the section achieves, for after Jephthah's lengthy message, in vs. 15-27, the Ammonite king does not care to continue the war of words. There follow the main combat (vs. 29-33) and the hero's return home (vs. 34-39).

1.2 Jephthah's main speech (vs. 15-27) tells a story within a story, namely the story of Israel's journey from Kadesh to the Jordan (cf. Num. 20-21, Deut. 2). I have given considerable attention elsewhere to similar cases of enclosing and enclosed narratives and the "intertextual" relationships between them;³ the basic move is to read the two narratives paradigmatically. Here, the enclosed story casts the main story in a definite light. "Israel" is defined as a negotiator, one who takes the initiative for peaceful solutions. Israel is careful not to preempt a situation by occupying the territory of others -- rather it sends messengers. Even when it meets with non-response or non-cooperation, Israel avoids conflict (the cases of Edom and Moab.) But if, through no fault of Israel's, conflict becomes unavoidable, as in the case of Sihon, king of the Amorites, then Israel's god teaches the enemy an exemplary lesson. All of this highlights by contrast the moves made by the king of Ammon in the main story. He occupies the disputed territory preemptively. He sends no messengers, but leaves it to Jephthah to do so. And, despite one show of readiness to negotiate (vs. 13), which is in fact merely a naked demand, he fails to answer Jephthah's messengers further (vs. 28), thus ranging himself alongside the kings of Edom and Moab, and Sihon, the non-answerers in the enclosed story. Despite his invocation of "peace" (vs. 13) he has really come to "make war" (vs. 27). Now, as we shall see later, the substance of our passage (what it purports to be about) is a legal claim and counter-claim over who has the right to a disputed territory. But the enclosed story hints that one of the litigants is not in good faith from the outset. Ammon's legal claim appears sham before it is even

considered on its merits, because Ammon is not a bargainer-in-good-faith, as Israel is. (The parallel between enclosed and enclosing stories is made unmistakably by a number of stylistic elements which cannot here be rehearsed in full; but note the elements of "sending messengers" (vs. 12, 14, 17, 19), of "not listening" (vs. 17, 28, cf. 20), and of "possessing/dispossessing" (vs. 21-24).)

2. Deconstructive reading

2.0 Our constructive structural analysis, therefore, has located Ammon in a villain role and demonstrated formal as well as substantive corollaries. When one considers the merits of Jephthah's case, however, a different and highly complex picture emerges, and it becomes clear that the case carries conviction only under the assumptions which the text strives to create. I wish to define a Level I of the text, consisting of vs. 12-20, 21b-22, 27a, 28 (I am not, of course, suggesting that this is a literary source or stratum.) This sequence contains Jephthah's main line of argument, while the excluded verses present subsidiary arguments which will be considered later.

2.1 Level I

2.11 There are two points to be made at this level. Firstly, since Jephthah concedes nothing at all to the Ammonite claim to the disputed territory, this claim lacks narrative plausibility even as a false claim. That is, the history Jephthah invokes, of how Israel avoided Edom and Moab, and tried to avoid the Amorites, has, on the face of it, nothing to do with Ammon or its claim. The mention of "the land of the Ammonites" in vs. 15 bespeaks an awareness of this problem, but it links up with nothing at all in the rest of the speech (though it is interesting that Deut. 2:19-23 expands the history by including an avoidance of Ammon.) The thread by which the logic hangs seems to be a pairing of Moab and Ammon as one unit; this is a point of central importance to my case, and I shall return to it later.

2.12 Secondly, it is hard to see why, logically, the Amorites were treated differently, in the enclosed story, from Edom and Moab. Israel approached each in the same

way, and was in each case refused. The only difference to which one might point is Sihon's show of force (vs. 20 -- note that in the tradition of Num. 20:20, Edom responded similarly!) Israel's occupation of Sihon's land thus acquires an accidental quality -- the territory now disputed with Ammon would never have become Israelite at all if Sihon had granted Israel's request for safe conduct. Israel left Edom and Moab unmolested despite their unhelpfulness; for similar unhelpfulness they dispossessed Sihon and his people, and this conquest is the basis of their legal claim!

2.2 Subsidiary levels

2.21 Level II consists of the appeal to divinity in vs. 21a, 23-24, 27b. Essentially, Jephthah says: "The territory was specially given to us by Yahweh our god; be content with what your god gives you!" Aside from the fact that he identifies the Ammonite god wrongly (cf. below), Jephthah's argument is vacuous -- may not Chemosh make a similar special gift (the Moabite Stone creates a pleasant irony!)? Why should it be Yahweh who decides the matter (vs. 27b)? This line of argument does not tie up with the main line - rather, the resort to it suggests some dissatisfaction with the main line.

2.22 Level III consists of vs. 25: "Are you any better than Balak the son of Zippor, king of Moab? Did he ever strive against Israel, or did he ever go to war with them?" Jephthah cannot get Moab off his mind. He included it, along with Ammon, and for no apparent reason, in his initial statement in vs. 15; and, as the commentators never fail to remind us, he "mistakenly" mentioned Chemosh the god of Moab, instead of Milcom the god of Ammon, in vs. 24. Now, and again gratuitously, he says that if Ammon has a claim Moab has at least as good a one -- which it has never pressed. But why raise the specter of a Moabite claim at all if Israel has never encroached on Moab's land, as Jephthah has earlier (in unison with Num. 21 and Deut. 2) so adamantly protested? Two important points may be made. Firstly, other traditions, especially those which locate Israel on "the plains of Moab" just before it crossed the Jordan (Num. 22:1, etc.), imply that it did encroach on land considered Moabite; and, in line with this, there are traditions about Balak himself which make it clear that, if not

actually going to war with Israel, he certainly did strive against them (Num. 22-24)! Secondly, and even more importantly, there is a prominent tradition in Num. 21:26-30 that the land which Israel took from Sihon was land which Sihon himself had previously taken from the Moabites by conquest. These two lines of tradition provide a "logical" explanation of Moab's significance in Jephthah's speech.

2.23 Level IV, consisting of vs. 26, makes the best sense if it is considered in close connection with Level III. Jephthah asks why the Ammonites have not pressed their claim in the long period since Israel's arrival. The entire Ammonite claim would begin to make sense, which to this point it never has, if it were on the same basis as Moab's hypothetical claim in vs. 25; that is, if Sihon had taken land from Ammon, as well as from Moab, which Israel subsequently took from Sihon. It is no great step to arrive at such a conclusion when Moab and Ammon are barely distinguishable; and a further point in support may tentatively be added. The territory defined in vs. 26 is much smaller than the entire disputed territory defined in vs. 13 and 22; it is the southern part, identical to what Israel took that had been Moab's in Num. 21:25-31. This provides a logical space for other territory of Sihon's that had been Ammon's (note the odd "second stage" in Num. 21:32 -- and cf. vs. 24!)

3. Conclusion

3.1 My thesis is that Israel has a sense of the dubiousness of its claim to Transjordanian territory; at least to the part of it, between the Arnon and the Jabbok, which is at issue in this passage (on the different logical status of the land north of the Jabbok, see my SBL Centennial paper.)⁴ Yet it also has a sense of the significance of this area for its own origins, which leads it to affirm its claim the more passionately (while compensating by tending to despise the Israelites who live there!) I shall summarize my deconstruction, and point the discussion further, under two headings.

3.2 Aside from his attempt to raise the matter above human legalities by a divine appeal (Level II), Jephthah's case seems to be worked out within a certain logic of the right of conquest. Israel holds by right of conquest land

which Sihon held by right of conquest over Moab (i.e. Moab-Ammon, from the text's viewpoint.) However, as the tradition at every point insists, Israel does not have any right of conquest over Moab or Ammon (also not over Edom.) The reason for this special relationship is presumably kinship (note how Deut. 2 repeatedly gives kinship as the reason why Israel must not molest these countries.) But an anomalous situation has arisen, which the logic cannot handle. Israel has acquired some Moabite-Ammonite territory laundered, as it were, through Sihon and the Amorites.

3.3 We must now return to the running problem of the compounding or confusion of Ammon with Moab. These countries do form a pair throughout Israelite tradition and the myth which accounts for this pairing also, I think, gives a clue to the territorial issue. This myth is in Gen. 19:30-38, where Moab and Ammon are the children of Lot by his two daughters. They are his sole heirs, since there is no mention of his having other sons, heirs therefore of the land he took in the great division with Abram in the other foundation myth of Gen. 13. The details of this division are not quite clear (partly on account of the traditional localization of Sodom,) but it was certainly a division between West and East (Gen. 13:10) likely to slip over in mythic logic into a division between Cis- and Transjordan. If this is so, then the land in dispute in our passage is land which Israel (mythically) "knows" to be Moabite-Ammonite. Further, in the pairing of Moab and Ammon, Moab has priority in being descended from Lot's elder daughter (Gen. 19:37); and the territorial problem we have defined arises elsewhere in the tradition (Numbers) only in relation to Moab. This may explain why, when the problem arises in connection with Ammon, there is a tendency to slip into talk of Moab -- so that Jephthah's mention of Chemosh is a Freudian slip!

3.4 If, finally, Israel had a simple, unambiguous sense that lower Transjordan properly belonged to its kinsfolk of Moab and Ammon, it must be embarrassed by the traditions of its own settlement there, not to mention by David's conquest of these lands within historical memory. The simple sense has therefore been obfuscated, the mythic "knowledge" has been circumvented, by the business about Sihon and the Amorites. An important source of

("permission" for) this mythic revision comes, I believe, from the sense of Moab and Ammon as disgraceful kin -- born of incest -- whose disgracefulness might reasonably be thought to give Israel some rights over them. This, however, is a line of thought which cannot be pursued further without extending the analysis to the whole Jephthah cycle.

NOTES

1. Gottwald, N.K., 1979, "The Tribes of Yahweh: A Sociology of the Religion of Liberated Israel 1250-1050 B.C.E.," Maryknoll, New York, p. 720.
2. Jobling, D., 1980, 'The Jordan a boundary': a reading of Numbers 32 and Joshua 22, Society of Biblical Literature Seminar Papers 19, pp. 183-207.
3. Particularly in Jobling, D., 1978, "The Sense of Biblical Narrative: Three Structural Analyses in the Old Testament," Sheffield, pp. 63-88.
4. See above, note 2.

STORY STRUCTURE AND SOCIAL STRUCTURE IN GENESIS:

CIRCLES AND CYCLES

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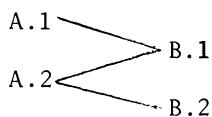
The patriarchal traditions of Genesis represent one of the most complex tapestries of theme and character development in the Old Testament. Source criticism has provided minute differentiation of textual elements in Genesis, and great diversity of contemporary thinking on the dating of oral traditions, story blocks, and redactional stages of the book (see, for example, Van Seters, 1975; Hayes and Miller, 1977; Thompson, 1974; Gammie, 1979). Structural analysis has been employed as an adjunct activity to source criticism within the community of biblical scholarship and by anthropologists working on problems of social structure and symbolic representation (see Leach 1969; Andriolo, 1973; Carroll, 1977; Marshall, 1979). This essay attempts to unite the broad concerns of structural and semiotic analysis with the source critical questions surrounding the Genesis redaction.

This investigation is specifically concerned with the patriarchal narratives of Genesis 12-50. The analysis deals with two narrative patterns observed in specific segments of the Abraham, Jacob, and Joseph stories: (a) a structural-oppositional pattern of movements of Abram and Jacob, and (b) a chiastic pattern of birth and death reports in Genesis 12-50. These structural devices contribute to the development of "life history" perspectives on particular patriarchs, and to the formation of narrative links between characters and story blocks of independent origin. The analysis shows that the stories of Genesis patriarchs are at best only stylized life histories. Surface properties of the narrative and inserted genealogical content show that "characterizations" are formal statements of political relationships in the

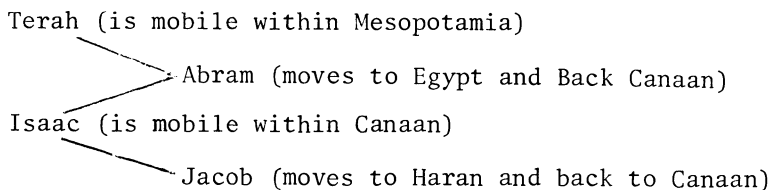
region surrounding Israel.

This analysis relates primarily to the final redaction stages of Genesis, and to a relatively late circle of priestly compiler-authorship. However, the kinds of textual relationships observed, even as surface elements of content, were created by the manipulation of the standard sources recognized in Genesis. Observation of patterns discussed here provides clues to the order of redaction of major stories, even though timing of the redaction sequence is not indicated through this analysis. Thus, we will observe evidence that the Abraham cycle (Genesis 12-25) is a compilation essentially "fit" to a basic pattern already established in the Jacob and Joseph stories. Further, the process of making the Abraham cycle consistent with other materials also shows the basic mythic character of the text--the patriarchs can be depicted as highly stylized characters with similarities and differences dictated mainly through kinship and literary structural necessity. Of course, the creation of such a Genesis has theological purpose; but the text is more political and "religious" than theological in the construction and meanings of surface details.

The main points of this essay are built upon a short piece by E. R. Leach (1966: 124-36, especially 131-2). Leach discusses ideas of time and patterns of alternation in social symbolism, citing especially the moiety-producing alternating pattern:



Among the social relationships potentially represented by the A's and B's in this pattern are the generations of a single lineage. The pattern makes sense as a "generational moiety" in the biblical genealogical sequence:



Abram and Jacob can be seen as having more in common with each other on the grounds of mobility, theophany, regional association, and other identifying factors.

When we pursue these commonalities, we find a number of striking elements of characterization which make Abram and Jacob logical opposites--more appropriately logical "duals"--of each other. Wherever Abram moves, Jacob moves opposite. Whatever Abram does, Jacob does opposite. Both, however, undergo similar "problems" or occupy similar social contexts within and outside Canaan. This textual phenomenon is produced, of course, by the ordering of story elements or by insertions of material to complete the symmetries of character opposition.

Figure 1 illustrates the basic elements of the logical relations linking Abram to Jacob. It is important to observe that Abraham's critical movements in the region all occur before the covenant of circumcision (Genesis 17), in the first half of the total Abraham cycle. He travels by way of Shechem and Bethel, through the Negev to Egypt where he acquires wealth, and back to Bethel where he resolves strife with his kinsman Lot in an honorable separation. This is followed by his movement to Hebron and the eventual establishment of the covenant. Jacob, on the other hand, moves from Beersheba to Haran by way of Bethel, acquires wealth and wives in Haran, and then returns to Succoth/Peniel where he resolves strife with his brother Esau honorably through separation.

Other points of detail are necessary for generalization of these events to a pattern. While in Egypt, Abram's wife Sarai acquires a hand-maiden who is destined to become the mother of Ishmael. Because of a behavioral breach after Sarai gives Hagar to Abram for the purposes of producing a child--Ishmael should technically have been considered Sarai's child--Hagar becomes a "wife" of Abram. This is substantiated in the eventual expulsion of Hagar and Ishmael, and the marriage of Ishmael to a woman of his "mother's" kinsmen:

Egyptian (wife-giver)-----Abram (wife taker)

Egyptian (wife-giver)-----Ishmael (wife-taker)

In essence, these marriages cite a "weak" matrimonial connection to Egypt for the Abram-Ishmael line. This is

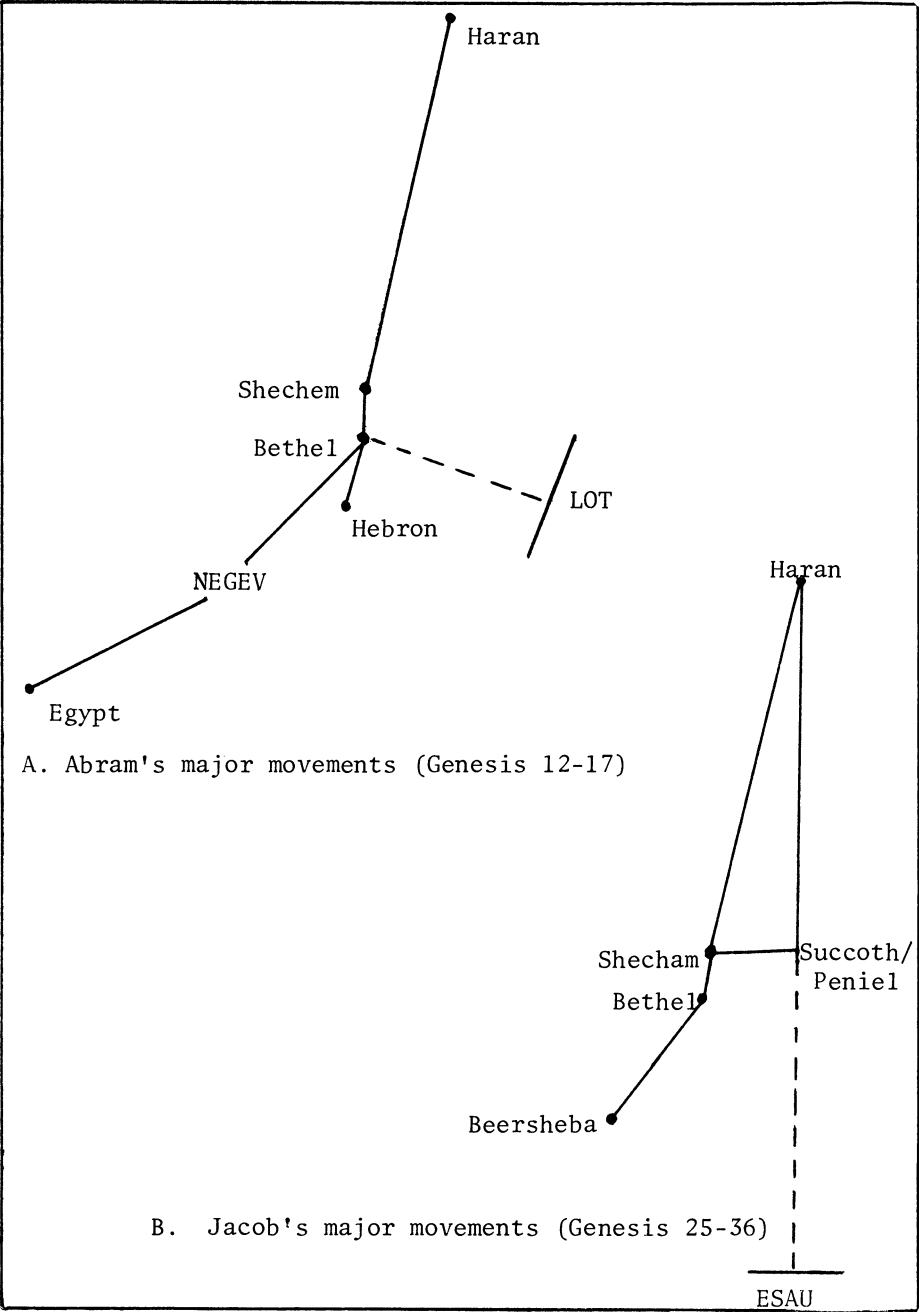


Figure 1. Mobility Patterns of Abram and Jacob.

hardly the strong connection Abram attempts in his efforts to "give" Sarai to Pharaoh as a wife (Genesis 12). This also shows that Jacob's connection to the descendants of Nahor is "opposite" to Abram's Egyptian tie:

Laban (wife-giver)-----Isaac (wife-taker)

Laban['s sons] (wife-giver)----Jacob (wife-taker)

A general pattern of movement and alliance for Jacob and Abram is shown in Figure 2. For each patriarch there is a zone of travel marked on opposite ends by points of "matrimonial alliance" or "alliance dissolution." Either of these points may be a "close" or a "distant" relationship. For Abram, then, there is a distant matrimonial alliance in Egypt through Hagar and a close relationship to a kinsman who becomes independent through alliance dissolution, namely Lot (Genesis 13). The closeness of Abram and Lot is signaled by Abram's reaction to Lot's capture in Genesis 14. For Jacob, a close matrimonial alliance is established in Haran and the separation from Esau is productive of only a distant kin tie. These patterns reflect the generally "close" ties of the Abrahamic line with the Arameans, and the more distant relationships to the peoples of the south and southwest, the areas of Egypt, the Paran wilderness, and Seir.

Within the pattern of movement there are three important stopping points. A "point of segmentation," the first noted sequentially in both narratives, occurs where Abram and Jacob become segmented from their kinsmen Lot and Esau. Second, after movement from the point of segmentation both Abram and Jacob become involved in regional strife. Abram intervenes in the interest of Lot and is blessed by Melchizedek; Jacob's sons Simeon and Levi take revenge on the **Shechemites** and Jacob fears reprisal. These "points of opposition" involve conflict with totally foreign groups from a political point of view, and are followed by still another movement. Abram is renamed Abraham and Jacob is renamed Israel at the third stopping point, termed here the "point of transformation." The characters of Abram and Jacob undergo isomorphic but opposite transformations: Abram is transformed to Abraham and apical member of an ambiguous marriage circle, while Jacob is brought from an ambiguous circumcision association to a new well-defined marriage circle, Israel.

The ideal pattern outlined for Abram and Jacob links

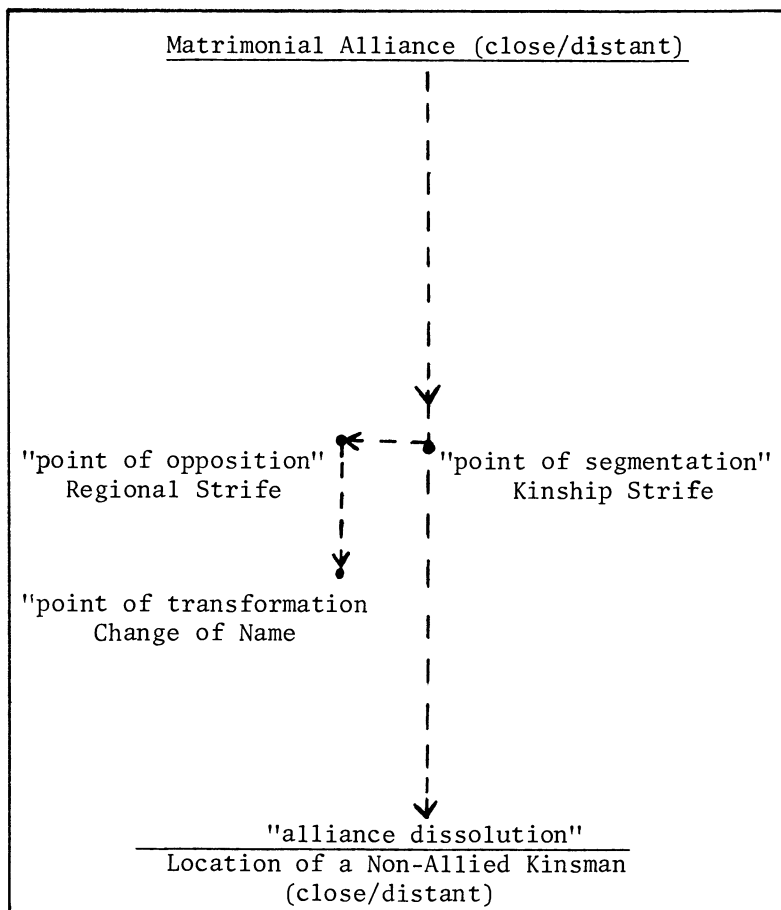


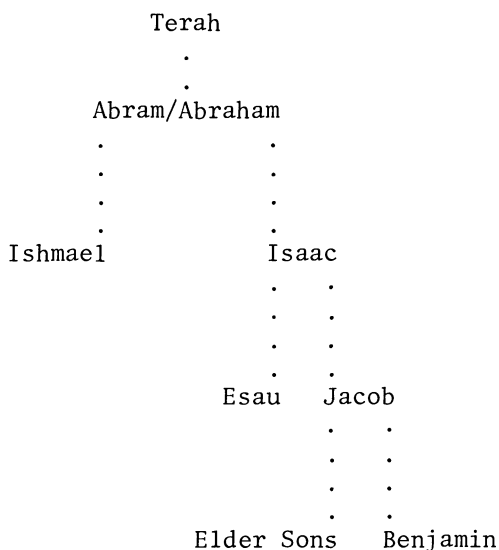
Figure 2. Ideal Pattern of Movements of Abram and Jacob.

Genesis 12-17 directly to Genesis 25-36. The Abram part of the Abraham cycle rests, however, upon a very different kind of source manipulation than that of the Jacob story.

Several crucial points of the Abram sequence, especially the rescue of Lot and the transformation to Abraham, are the results of insertions of late Priestly writings or highly divergent material. It is also true that there are two reports of Jacob's transformation to Israel, only one of which "fits" the pattern proposed here. But most of the materials indicate that oppositional similarities between Jacob and Abram are imposed by textual manipulation, including relatively free reorganization of original stories comprising the base of the Abraham cycle.

If we argue that the Abraham cycle was essentially "fit" to an already established story line in the Jacob story, in order to create oppositional qualities between grandfather and grandson patriarchs, then we might well seek other and broader textual correspondences. Returning to Leach's original arguments about representations of time, we find an emphasis upon the basic events of existence--life, death, and rites of passage. It is these events that punctuate generations, and in this case that punctuate the text of Genesis. There are genealogical segments prior to the Abraham cycle, of course, mainly in the form of lineage lists. But beginning with the last verses of Genesis 11, the short expansion of the Terahite genealogy, the nature and purpose of most birth and death reports changes drastically from the materials of Genesis 4, 5, 10 and 11. First, people are traced by both male and female connection, especially the central patriarchs. Second, individual reports become part of a narrative flow, in some cases cited in a single, apparently insignificant verse. Third, and most important, the reports of individual births and deaths form a clear pattern linking all of the Abraham cycle to the combined stories of Jacob and Israel, or Genesis 12-25 to 25-50.

The Genesis account of the patriarchs presents birth and death details mainly for the key individuals of the central Shemite genealogy:



Among the "elder sons" of Jacob we may distinguish between the Leah and Rachel offspring, with Judah and Joseph figuring prominently in the narrative action. Surrounding the central characters of the narrative are other kinsmen--Lot and his children, highborn women, and numerous others listed in genealogies. The longest genealogical lists are associated with Ishmael's descendants, the offspring of Milcah, and the groups of Edom. By discounting these long lists and the children of Abraham and Keturah, a clear pattern of birth and death report correspondences emerges for Genesis 12-25 and 25-50. This pattern is diagrammed as a chiasmus in Figure 3.

The corresponding elements of Figure 3 are identified by letters assigned to each report (or group of reports). It will be noted that four "groups" of reports show clear topical relationships: two "C" elements consist of deaths of women married to Lot and Judah and the births of these men's sons; and two "E" elements depicting deaths at holy places (Moriah and Bethlehem), important births, and deaths of pivotal matriarchs. These report groups occur as contiguous verses or closely associated verses. Other reports found near each other in the text, such as the deaths of Abraham and Ishmael and the births of Esau and Jacob (all in Genesis 25), are separated by other materials or clear textual markers.

- A. Terah d. (11:32)
- B. Ishmael b. (16:15)
 - C. Lot's wife d. (19:26)
 - Moab b. (19:37)
 - Ammon b. (19:38)
 - D. Isaac b. (21:2)
 - E. Ram (replacing Isaac) d. (22:13)
 - Rebekah b. (22:23) [in genealogical segment]
 - Sarah d. (23:1)
 - F. Abraham d. (25:8)
 - G. Ishmael d. (25:17-8)
 - [genealogical lists of Ishmaelites]
 - G. Esau and Jacob b. (25:25-6)
 - F. Reuben to Joseph b. (29:32--30:24)
 - E. Deborah (Rebekah's nurse) d. (35:8)
 - Benjamin b. (35:17)
 - Rachel d. (35:19)
 - D. Isaac d. (35:29) [genealogical lists of Edom in 36]
 - C. Judah's wife d. (38:12) [Er and Onan killed by Yahweh]
 - Perez b. (38:29)
 - Zerah b. (38:30)
 - B. Jacob d. (49:33)
 - A. Joseph d. (50:26)

Figure 3. Primary birth and death reports in Genesis beginning with the death of Terah and ending with the death of Joseph.

The correspondence of Ishmael's birth and the births of Jacob's first eleven sons (the "B" elements in the sequence) relates "elder sons" of the generation of Isaac and the generation of Isaac's grandchildren. The parallel is clearly shown also in the separation of the report of Benjamin's birth in the narrative, just as the birth of Isaac is separated from that of Ishmael. The counterpart association in the pattern links two "F" elements, the deaths of Abraham and Jacob. These patriarchs are the oppositional "duals" of our mobility analysis, and again represent grandfather and grandson generations. The "A" elements are the deaths of Terah and Joseph--bracketing events for the whole sequence. The "G" elements seem more difficult to construe as similar. Of course, these events are the turning point of the whole pattern, and in a sense they should be related to the deaths of Terah and Joseph. That works well for the death of Ishmael, but not for the birth of Esau and Jacob. There are clues that Esau is not as significant to the birth/death sequence as Jacob. For instance, Esau's death is not reported (an event which would likely disrupt the sequence somewhere after Isaac's death if it were reported). Second, Jacob's birth stands as an emphasis of Isaac's offspring over the descendants of the (immediately preceding report) deceased Ishmael. Finally, the symmetry of relationships of the whole list of reports, including central positioning of Isaac's birth and death, is shown when the chiasmus is arranged in a "chi" pattern (Figure 4).

These superficial structural parallels do provide clues to the relationships of the Abraham, Jacob, and Joseph cycles. The symmetry of the birth-death sequence in particular accounts for the placements of the Ammon/Moab birth account, the genealogy in which Rebekah is introduced, and the story about acquisition of the patriarchal tomb in Canaan. While it is possible that some elements of the Joseph and Jacob stories were placed to conform to Abraham cycle events, the bulk of evidence suggests that this was not the case. Other than Genesis 38, Genesis 49, and a few obvious Priestly insertions, there are few elements of Genesis 25-50 which allow source segmentation. Indeed, even Genesis 38 and 49 have been recently argued to be integral to the Joseph narrative on stylistic and linguistic grounds (Coats 1976, Emmerton 1976). But the same cannot be said for the diverse materials of Genesis 12-25.

Thus, two surface structural patterns in the Genesis

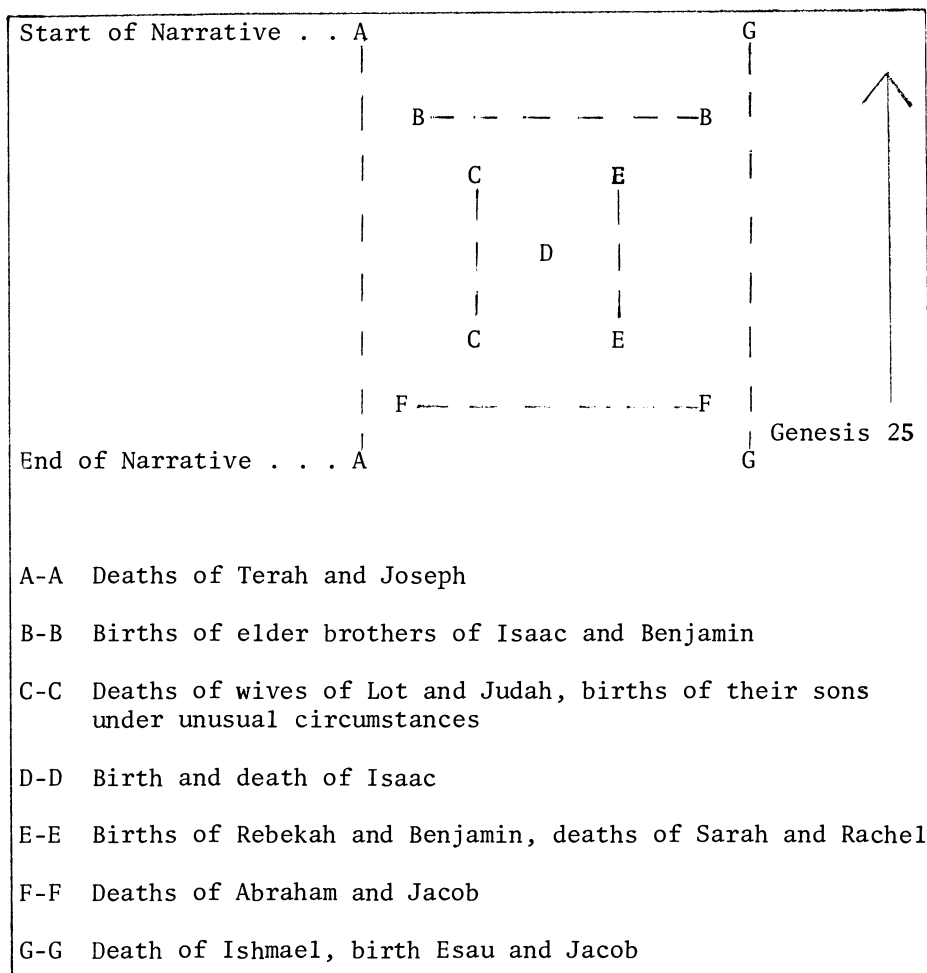


Figure 4. Chiastic organization of birth and death reports in Genesis 12-50.

narrative show organizational links between: (a) Genesis 12-17 and Genesis 25-36, and (b) Genesis 12-25 and Genesis 25-50. The links suggest that the Abraham stories were redacted to "fit" an established narrative pattern in the Jacob/Joseph stories. The meanings of the two patterns are generally tied to characterization of the patriarchal line. While in most cases the meanings of particular associations appear trivial, some of the parallels between characters in the birth-death cycles may have political or theological significance. The mobility structure common to Abram and Jacob seems to be largely political in nature, relating as it does to "proper" and "improper" matrimonial alliances. This theme is also elaborated in the stories surrounding the birth reports of Ammon/Moab and Perez/Zerah, and the birth of Manasseh and Ephraim (Genesis 41; not included in birth/death pattern reported here) and their subsequent adoption by Israel.

The political features of genealogical segments, individual birth and death reports, and territorial notations in the text of Genesis, though recognized in contemporary biblical scholarship (see Vawter, 1977; Wilson, 1975, 1977), are still not sufficiently stressed. Comparison of biblical genealogies with contemporary genealogical recitations (see, for example, Irvine, 1978) should provide insights as to the purposes of diverse kinds of relational assertions. The kinds of political fictions created in the text tell us about the redactional community, as well as inform us about general social conditions in the region during the first millennium B.C.E. and earlier.

In spite of the limited scope of this analysis, some preliminary interpretations of the composite genealogical material in Genesis 12-50 is possible here. Basically, the genealogies sort out groups of people in the region surrounding Canaan while placing each group in a ranked association with Israel on the basis of generational links (for technical treatments of kinds of associations see Prewitt, 1981; Andriolo, 1973). Each group, then, has a generation and place identification, places sometimes being differentiated by boundary points. The characterizations of Abram and Jacob help define geographic divisions, boundary points, and status as potential wife-givers and wife-takers. This is especially done as part of the mobility pattern discussed above. For the main Abrahamic line, finally, there are three "historical" associations of marriage alliance. These are (a) an early

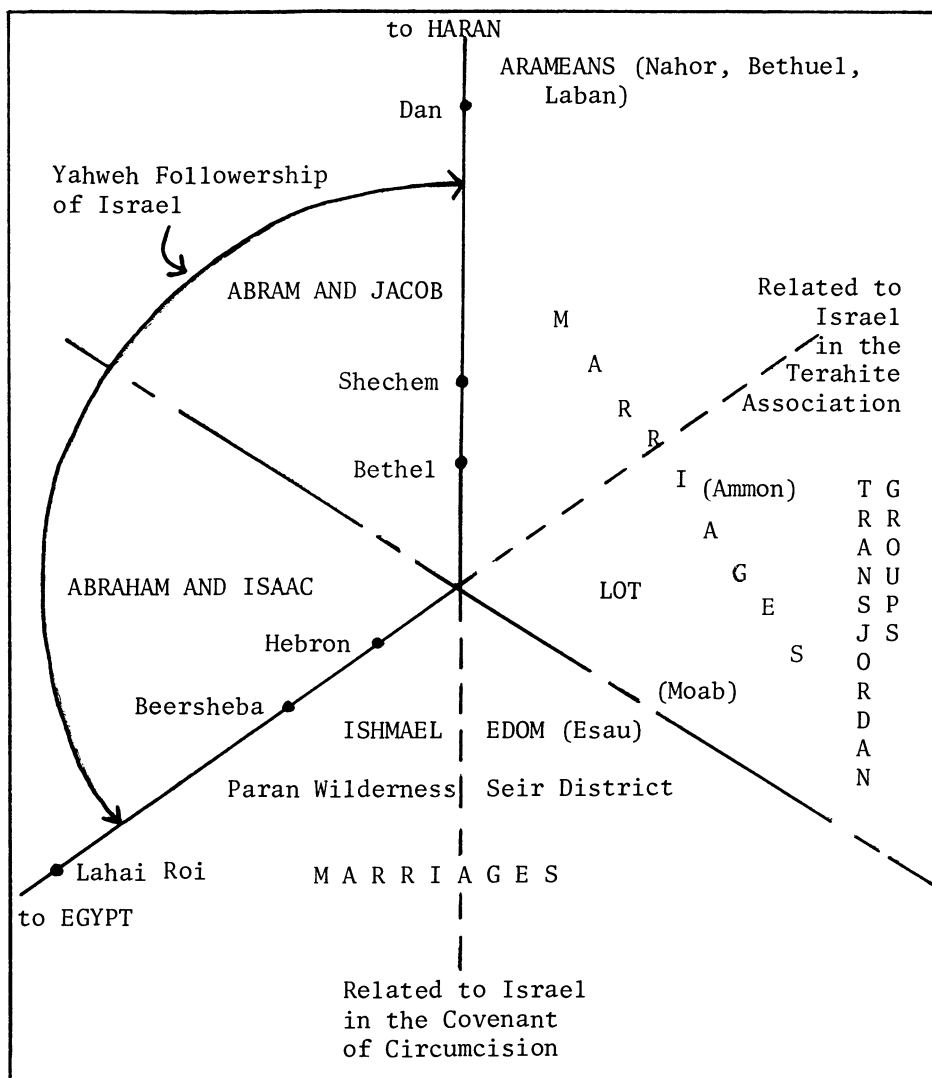


Figure 5. Mobility lines, boundary points, and patriarchs of Genesis as a map of political relationships and historical-fictional associations.

marriage circle involving Terah's sons, (b) the Covenant of Circumcision, and (c) the association of Israel. These historical associations in turn have overlapping geographic associations depicted in Figure 5. It should be clear that the purpose of the historical fictions concerning social structure is to allow justifications of the political associations between actual groups in space at some specific historical period. The literary (originally verbal) map of the region is a very well-ordered and highly simplified political construction. It is a manifestation of an ideology benefiting no doubt, from a complex of closely related genealogical and folkloric traditions in the region where Israel was formed. Indeed the fictional "stages" of marriage association offer a kind of sociological debate and justification of particular marriage practices designed to garner for Israel a claim to considerable political power in the region. This is a point strongly argued by Leach (1969), but worthy of further elaboration. In brief, when we approach surface genealogical content of Genesis as a unified "argument" we find sophistication in the wielding of what we would today call "social models."

I believe that the sorting out of political concerns in Genesis is a prerequisite of understanding moral, theological, or historical content of the book. The people responsible for the Genesis genealogies and the characterizations of Abram and Jacob were concerned with territorial and political questions first, not as an incidental and secondary activity. Figure 5 is a representation of the beginning framework, rooted in the logic of myth and folkloric symbols, for the whole Torah. It is a direct reflection of a specific priesthood, and a partial reflection of several antecedent priesthoods. It is probably best understood as a "theory" of Israel; it is perhaps the clearest set of meanings in the whole of Genesis.

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Author Index

- Abel, 5, 508
 Abo, T., 148, 150
 Abraham, 508, 510, 511, 514-518
 Abram, 510, 527, 529-543
 Achilles, 491
 Adam, Frances, 155, 163
 Adam, 484
 Adey, G., 47
 Adorno, T., 277, 278
 Agenor, 461, 468
 Ahmad, 227
 Ahriman, 5
 Akmajian, A., 200
 Alberti, Leon Battista, 330-332, 334, 336
 Albright, W. F., 518
 Alcott, Louisa May, 206
 Aldrich, K., 472
 Alexander, Hubert G., 108, 116
 Allah, 227
 Allais, Alphonse, 365
 Alston, 23
 Ammon, 537-538, 540-541
 Ampere, 369-370
 Andersen, Henning, 196-197, 466, 471-472
 Anderson, J. R. L., 18
 Anderson, R., 98, 104
 Anderson, R.C., 323-324
 Andriolo, K. 529, 540, 542
 Angenot, M., 154, 163
 Anrep, Boris, 224
 Anselmo, 183-184, 187-188
 Antilla, Raimo, 197-198
 Apel, K-O., 40, 47
 Aphek, Edna, xiii, 439-440, 445-446
 Aphrodite, 255, 257
 Apollodorus, 467, 472
 Aquinas, Thomas, 488-489, 493
 Aram, 515
 Areli, 515
 Ares, 468
 Argonauts, 264
 Aristotle, 3, 155, 420
 Arodi, 515
 Asher, 515
 Augustine, 9-10
 Austin, Gilbert, 154-155
 Austin, John 172-173
 Axmatova, Anna, xi, 223-228
 Ayatollah, 202
 Bacon, A. M., 155, 163
 Bacon, Francis, 27, 155, 369-370, 485
 Bain, 172
 Bally, C. 92, 472
 Bar-Hillel, Y. 126, 128
 Baron, N. S., 480
 Barthes, R. 387, 398, 472
 Bartlett, F. C. 322, 324
 Barton, G. A. 507, 518
 Baskin, W. 92, 472
 Bates, E. 162-163

- Baudelaire, 365
 Bauman, Richard, viii
 Beardsley, 464
 Beckett, Samuel, 116, 294-299
 Beckwith, J. 457
 Beeri, 511
 Beersheba, 541
 Beidelman, T. O., 140, 150
 Bell, J., 472
 Ben Abba, D. 516, 518
 Bender, B. 148, 150
 Benjamin, 536-539
 Bentham, Jeremy, 172
 Beriah, 515
 Bergman, 445-446
 Berkeley, G., 22, 27, 172
 Bernhardt, Sarah, 285
 Bernstein, B. 126, 128
 Bernstein, Richard, 174, 176
 Bergin, T. G. 493
 Bershad, Deborah, xiii, 449
 Bethuel, 513-518, 541
 Bethula, 516
 Betterton, 285
 Bettinghaus, E., 446
 Bickerton, D., 15, 20
 Bilhah, 511, 516
 Binnick, Bob, 201, 205
 Birdwhistell, Ray L., 149-150
 160, 163
 Blakely, Thomas, 126, 136-137, 150
 Blakemore, C., 11
 Block, G. H., 13-14, 20
 Bloomfield, R. 336
 Boas, Franz, 159
 Boileau, Nicolas D., 327, 336
 Bolinger, Dwight, 203, 207
 Boole, 418
 Bonta, J. P. 397-398
 Boon, J. A., 90-92
 Borges, J. L., 263
 Bouissac, Paul, ix, 3, 10-11
 Bourgeois, P. L., 83, 92
 Bransford, J. D., 322-324
 Brawn, G., 398
 Bréal, 16
 Bremster, G., 481
 Brentano, F., 22, 27
 Bretteville, Abbe, 154
 Brewer, W. F. 323-324
 Broadbent, G., 398
 Broch, Hermann, 277-278
 Brockelman, P., 116
 Brown, B. E., 175-176
 Brown, M. 149-150
 Browning, Elizabeth B., 206
 Browning, R., 457
 Brusatin, M., 336
 Buchler, Justus, 29, 35, 37, 366-367
 Buczynska-Garewicz, H. 276, 278
 Bulwer, John, 154-156, 163
 Bunt, R. 398
 Burbage, 285
 Burgess, John W., 176
 Burgin, Victor, 263
 Burks, A. W., 93, 177, 422, 436
 Burtt, E. A., 27
 Busi, F., 299
 Buss, M., 543
 Butler, H. E., 164
 Butterworth, Brian, 204, 207
 Buz, 515
 Cadmos, 461, 467-468
 Cain, 5, 508
 Caminade, 13, 20
 Capek, Karel, 206
 Carey, Robert F., x, 97-98, 104-105
 Carnap, Rudolph, 428-429, 434, 436
 Carpenter, J. E., 507, 518
 Carroll, John B., 56-57, 203, 207
 Carroll, Michael, 461, 472, 529, 543
 Carucci, Laurence M., x, 139-141, 146-147, 149-150
 Carton, A. S., 207
 Casey, E., 116

- Caslett, P., 177
 Chaplin, Charlie, 297
 Champollion, 364
 Chaucer, 377
 Chemosh, 525
 Cherry, C., 48
 Chesed, 515
 Chinoy, H. K., 291
 Choul, Jean-Claude, ix, 13-14, 18-20
 Chomsky, N., 203, 206-207, 320, 324
 Christ, 141, 146, 295, 454
 Cirlot, J. E., 228
 Civ'jan, T., 224, 228
 Clark, G., 507, 518
 Cleary, 154-155
 Coats, G. W., 538, 542
 Cole, T., 291
 Coleridge, S.T., 492-493
 Collingwood, R. G., x, 179-188
 Comte, 369-370
 Condillac, Etienne, v, 155
 163
 Cook, J., 92
 Cook, J.E., 172, 175-176
 Corti, M. 440, 446
 Courtès, 17-18, 20
 Cowan, J M., 229
 Cresollius, 154
 Creuzer, F., 487, 493
 Crick, 371
 Critchely, M., 34, 36
 Croce, 183
 Cronkite, G., 446
 Crosman, I., 116
 Culler, J., 89, 92, 104-105, 114, 116
 Cushing, 468
 Cvetaeva, Marina, 227-228
 Dan, 541
 Danehy, J., 445, 447
 Danow, D. K., xi, 211
 David, A. A., 188
 Davies, 42, 47
 de Beaumont, 175
 Deborah, 537
 de Conrart, 154
 Deely, John N., iii, viii-ix, 21, 26-27
 DeFord, D., 102, 105
 Deitchman-Smith, Ann viii
 Delafresnaye, J.F., 27-28
 Deledalle, G., 88, 92
 Deleuze, Gilles, 236-237
 Demers, R. A., 200
 De Morgan, 418
 Demus, Otto, 454-455, 457
 de Regnier, Henri, 73
 Derrida, J., 263, 522
 Descartes, R., 21-23, 25, 27, 187, 412, 424-427, 429, 431
 deToqueville, 175
 Devil, 489
 Devoe, S., 164
 Dewey, James, 436, 457
 Diderot, 115
 Didi, 297
 di Jorio, 158, 163
 Dimond, S. J., 11
 Dinah, 512, 517
 Dionysius, 486, 493
 Doctorow, E. L., 66
 Donagan, A., 188
 Dorfles, G., 278
 Dostoevsky, 220
 Dufrenne, Mikel, 107, 110-112, 116
 Duhem, 357
 Duns Scotus, 433
 Durkheim, 158, 375
 Eason, 42, 47
 Easton, L. D., 480
 Eco, Umberto, 73-81, 90-92, 107, 109, 116, 239, 289-290, 359-367, 384

- Edelman, G., 9, 11
 Edie, J. M., 291
 Efron, D., 159, 163
 Egorov, B. F., 440, 446
 Einstein, Albert, 180, 420, 481
 Eisele, Carolyn, xiii, 93, 417, 421-422
 Ekman, Paul, 161, 163
 Elohim, 507
 Elon, 511
 Emerson, Ralph Waldo, 206
 Emmerton, J. A. 538, 543
 Engels, F., 480
 Ephraim, 512-513, 540
 Epicurus, 485
 Er, 513
 Eri, 515
 Erickson, Arthur, 388, 398
 Esau, 510-511, 513, 517, 531, 533, 536-539, 541
 Estragon, 295, 297-298
 Etao, 139-148
 Etchells, F., 336
 Eteocles, 461
 Euclid, 417-420
 Europa, 461, 468
 Eva, 309
 Eve, 508
 Ezbon, 515
 Ezra, 518

 Fanshel, D., 445-446
 Feibleman, J., 30, 36, 414
 Ferri, S., 336
 Filangieri, 483
 Fisch, Max H., 33, 36, 172-173, 176-177, 493
 Fitzgerald, John, 91-92
 Flaubert, Gustave, 325
 Fletcher, J., 299
 Fontanier, 15, 20
 Foucault, Michel, 39, 40, 43, 47, 269, 370-371, 457
 Fowler, F. G., 13, 15-16, 20
 Fowler, H. W., 13-16, 20
 Franks, J. J., 322-324
 Frascari, Marco, xii, 325-326, 336
 Fraser, A. C., 28, 172-174
 Freeman, E., 85, 92
 Frege, Gottlob, 60, 70-71
 Freud, 204, 263
 Friedel, F., 176
 Friesen, W. V., 161, 163
 Frisby, D., 47
 Fromm, E., 481

 Gad, 515
 Gaham, 515
 Galileo, 420
 Gameros, Manuel, xi, 239
 Gamete, J. G., 529, 543
 Gandelsonas, 400
 Gardners, 161-162, 348
 Garfinkel, H., 126, 128
 Gaston, Dorothy J., xiv, 505
 Geertz, C., 141, 150
 Geller, J., 164
 Genette, Gérard, 233, 237
 George, R. A., 436
 Gibson, J. J., 382
 Gielgud, John, 283-285, 287, 290
 Giesz, Ludwig, 277
 Gilman, Charlotte P., 302
 Giordano, Michael J., ix, 29
 Gleser, 408
 Głowinski, M., 109, 116
 Gluck, B. R., 299
 Goblot, 502
 God, 142, 183-184, 187-188, 308, 313-314, 325, 404, 454, 456, 484
 Godot, xi, 293-297, 299
 Goethe, J. W., 483, 493
 Goffman, E., 128-129, 135, 137
 Gombrich, E., 250, 261
 Gonda, J., 255
 Goodman, K. S., 102, 105
 Goodwin, Charles, x, 119, 126-128

- Goodwin, Marjorie H., x, 129, 137, 150-151
 Goody, J., 480
 Gorenko, 223-228
 Gottschalk, 408-409
 Gottwald, Norman K., 521, 528
 Gowers, 15, 20
 Gozo, 297
 Green, St. John, 172
 Greimas, A. J., 4, 14, 17-18, 20, 462-463, 472
 Grice, H. P., 55, 57
 Grotowski, 286, 290
 Gross, G. R. T., 27
 Guba, 103
 Guddat, K. H., 480
 Gudschinsky, S., 480
 Guiraud, P., 32-33, 36, 497, 499-501
 Gumperz, J., 128
 Gurvitch, 497
 Gusdorf, Georges, 114, 116
 Guttenberg, 478
 Habermas, 47
 Hagar, 510, 516, 531, 533
 Haggi, 515
 Haight, A., 228
 Haiman, John 195
 Hajda, Lubomir, 229
 Haldane, E. S., 27
 Hall, Edward T., 149, 151
 Halliday, M. A. K., 104-105, 119, 126, 128, 444, 446
 Hamlet, 62, 285, 287-288
 Hamor, 512
 Hardwick, C. S., 92, 172
 Harford, G., 518
 Harlequin, 297
 Harmonia, 468
 Harnish, R. M., 200
 Harris, M., 103, 105
 Hartig, M. 446
 Harste, J., 98, 104-105
 Hartshorne, C., 93, 177, 261, 399, 414, 422, 436
 Hasan, R., 119, 126, 128
 Havelock, E., 480
 Hayes, J., 529, 543
 Hayes, Keith L., viii
 Hazo, 515
 Heath, Sir Thomas, 419
 Hebb, D. O., 21, 27
 Heber, 515
 Hebron, 541
 Heckscher, W. S., 336
 Hecresche, 325
 Hegel, G. W. F., 184, 187, 483-484, 487-490, 493
 Heilmann, L., 472
 Heilbroner, R., 480
 Helmholtz, Herman von, 330, 334
 Hendricks, W., 444, 446
 Herder, J. G., 483, 490, 493
 Hewes, Gordon W., 161, 163
 Hjelmslev, 9-10
 Hobbes, 485
 Hockett, Charles F., 161, 163, 445, 447
 Holenstein, E., 89, 93
 Holmes, Oliver W., 173
 Homer, 450
 Horner, Jack K., xii, 347
 Hoveland, C. I., 442, 446
 Howell, R. Patton, xiii, 399
 Howitt, 158
 Hugo, Victor, 473-474, 479
 Humboldt, 193
 Hume, D., 22, 25, 27, 182
 Hunger, H., 457
 Husserl, Edmund, 22, 232-233, 237
 Hymes, D., 128
 Imbert, P., 10, 11
 Imnah, 515
 Ingarden, Roman, 274, 278
 Innis, Harold, 380-381, 384
 Irvine, J. 540, 543

- Isaac, 167, 508, 510-511, 514, Kant, I., 22, 25, 27, 52, 73,
 516-517, 530, 533, 536-172-173, 187, 426-427
 539, 541 Kaplan, D., 11
 Iser, Wolfgang, 112, 116 Kaplan, S. K., 446
 Ishmael, 508, 510-511, 514, Kean, 285
 531, 536-539, 541 Keifer, E., 20
 Ishui, 515 Keil, F. C., 202, 207
 Ishvah, 515 Kemble, 285
 Kemuel, 515
 Jacob, 508, 510-512, 515-516, Kendon, Adam, x, 126-128, 136-
 529-542 137, 145, 150-151, 153,
 160, 163
 Jacobi, H., 483 Kepler, 420
 Jakobson, C., 472 Ketchian, Sonia, xi, 223
 Jakobson, R., 35-36, 93, 193, Ketner, K. L. 172, 175-176
 196-197, 212, 221, 241, Keturah, 536
 261, 365, 461-462, 465-466, 472
 466, 472 Kevelson, Roberta, x, 167, 169,
 176
 James, 84 King, Terrance, xii, 359
 Jason, 264 Kjeldergaard, P. M., 207
 Jeanmere Gris, C., 336 Knoxpen, M. 326, 336
 Jebero, 147 Krausz, M., 187, 189
 Jefferson, G., 126-128, 136- Kronegger, M.E., xi, 231, 236
 137 Kubie, L. S., 21, 28
 Jellicoe, Ann, 108, 116
 Jencks, C., 397-398, 400
 Jenkins, R. J. H., 457
 Jephthah, 522-526
 Jesus, 451
 Jidlaph, 515
 Jimenez-Ottalengo, Regina xii, Laban, 511, 514-515, 533, 541
 369 Langellier, Kristin M., x, 107
 Jobling, David, xiv, 521, 528 Langendoen, Terry, 206
 Johnson, P. 325, 336' Lanigan, Richard L. ix, 39, 84,
 Johnson-Laird, P. N., 203, 207 87, 93, 288, 290
 Joseph, 512-513, 529-530, 536- Larin, B. A., 228
 540, 542 Lashley, K. S., 21, 28
 Jove, 163, 490 Laurel and Hardy, 297
 Joyce, James, 299 Eavers, A., 398, 472
 Judah, 510, 512-513, 517, 536, Leach, E. R., 529-530, 535,
 539 542-543
 Judith, 511 Leah, 508, 515-516, 536
 Jung, C. G., 141, 151 LeCorbusier, 325, 336
 Lee, A., 442, 447
 Kafka, 313-314 Leenhardt, Jacques, 113, 116
 Kahn, Joan Y., xii, 337 Lehrman, 398
 Kahn, Louis, 332, 335-336 Leibniz, 22, 52, 485

- Lekomceva, M. I., 440, 447
 Lemon, L. T., 221
 Lenhart, Carl, viii
 Lenhart, Margot D., iii, viii
 L'Epee, Abbe, 156
 Levi, 508, 512-513, 533
 Levi-Brüll, 376
 Levin, 15, 19-20
 Levi-Strauss, C., xiii, 365,
 459-461, 464-472, 480,
 522
 Lieber, Francis, x, 167-177
 Lindsey, Shelagh, xii, 387
 Liszka, James J., xiii, 459
 Lock, A., 162-163
 Locke, J. 22-23, 25, 28, 163,
 168-169, 171, 173-175
 179, 189, 485
 Longfellow, Henry W., 206
 Lord, 489
 Lot, 517, 527, 531, 533, 535-
 536, 539, 541
 Lotman, J. M., 328, 336
 Lowenberg, I., 15, 20
 Lucid, D., 446-447
 Lucky, 295, 297-298
 Lucretius, 485, 493
 Lyons, J., 126-128

 McAlister, L. L., 27
 McBride, Richard D., xiii, 399
 McCarthy, T., 47
 McCleary, R. C., 48
 McCleary, R. M., 116
 McLuhan, Marshall, 379-380,
 384
 McMurtrey, Kevin, xiii, 423
 McQuire, W. J., 98, 105

 Maacah, 515
 Macready, 285'
 Mahalath, 511
 Malchiel, 515
 Mallery, Garrick, 158
 Manasseh, 512-513, 540
 Mandonnet, P., 493
 Mango, Cyril, 449-450, 457
 Maranda, Elli, 470-472
 Maranda, Pierre, 470 472
 Marchand, 15, 20
 Marcel, 234-236
 Marcus, 43, 48
 Marquez, Gabriel G., 66
 Marsh, P., 163
 Marshall, R., 529, 543
 Martin, B. W., 440, 447
 Martinet, 472
 Marx, K. 476, 480
 Matthews, 15, 20
 Mayer, R. E., 320, 324
 Mead, Geo. Herbert, 428, 436
 Meggitt, M., 158-159, 163
 Melchizedek, 533
 Merleau-Ponty, M., ix, 39-48,
 114-116, 232-234, 236-
 237, 282-283, 286, 290
 Meschonnic, Henri, 10, 11
 Michelson, 181, 185
 Milcah, 513-515, 536
 Milcom, 525
 Mill, 27, 171
 Millay, Edna St. Vincent, 206
 Miller, G. A., 203, 207
 Miller, G. R., 442, 447
 Miller, J., 529, 543
 Miller, J. Hillis, 257, 261
 Mishler, E., 103, 105
 Moab, 537-533, 540-541
 Mohammed, 227
 Mondrian, 278
 Moore, E., 176
 Morley, 181, 185
 Morris, Charles, xiii, 240, 253,
 261, 400-401, 403-405,
 412, 423, 428-436
 Morris, D., 154, 163
 Morris, Jane, 253, 257, 260
 Mosher, J. A., 155, 163
 Mostow, Joshua, xi, 249
 Mountcastle, V., 9, 11

- Nadin, Mihai, xiii, 473
 Nahor, 513-515, 533, 541
 Napoleon, 364
 Nebaioth, 511
 Needham, R., 472, 506, 518
 Nekhludov, 220
 Neurath, 263
 Newberry, Alice, ix, 49
 Newton, 180-181, 185
 Nicole, A., 111, 116
 Nidditch, P. H., 28, 189
 Niklas, Ursula, xi, 273
 Nimmo, D., 93
 Nixon, Richard, 64-66, 68-69
 Nourse, J., 163
 Nugent, Thomas, 163
 Nyrop, 16

 Oedipus, 459, 461, 464, 467
 Onan, 513
 O'Neill, J., 47
 Ormazd, 5
 Ortega y Gasset, J., 211, 221
 Osborne, H., 278
 Osgood, C. E., 202, 207
 O'Shaughnessy, M., 163
 Ostrogorsky, G., 457
 Ott, E. A., 155, 163

 Panza, Sancho, 297
 Partridge, E., 153, 164
 Pater, 261
 Patte, Daniel, viii
 Peckham, Morse, 387, 384
 Peirce, Charles S., ix, xii, xiii, 4-5, 9-10, 12, 27, 29-33, 35-37, 59-61, 68, 70-72, 74-75, 79-80, 83-84, 85-93, 126, 148, 151, 167-177, 196, 249-250, 258, 260-261, 276, 279, 359-360, 363-364, 366-367, 369, 399, 402-407, 410, 412, 413-415, 417-436, 452, 457, 474
 Perez, 510, 512, 537, 540
 Perron, P., 11
 Perry, T. S., 175-176
 Pesaresi, Massimo, xiii, 483
 Peterson, Eric, E., xi
 Petöfi, J.S., 15, 20
 Pfaff, Ivan, 315
 Pfeiffer, R. H., 505, 518
 Pharaoh, 533
 Piaget, J., 370
 Pichert, J.W., 323-324
 Pierrot, 297
 Pildash, 515
 Pittinger, R., 445-447
 Plato, 420, 485
 Plaut, G. W., 514, 516-519
 Poe, Edgar Allen, 206, 313
 Poincare, 336
 Poinot, 9-10, 26-27
 Poláček, Kaca, 315
 Polany, M., 185-186, 189
 Polynices, 461
 Portogesi, P., 336
 Pozzo, 295, 298
 Prewitt, Terry J., xiv, 529, 540, 543
 Preziosi, Donald, xi, 263
 Pribram, K., 9, 11-12
 Prigogine, 411
 Propp, V., 447, 461
 Proust, M., 231, 234-237
 Psathas, G., 128
 Puškin, 225
 Putnam, H., 55, 57, 357
 Pythagoras, 420

 Quine, W. V. O., 23, 49, 52-54, 56-57, 357
 Quintilian, M. F., 154-155, 164
 Quirk, Randolph, 198-200
 Quisling, Vidkun, 63
 Quixote, Don, 297

 Rachel, 516, 536-537, 539
 Ramee, D., 336
 Rancurello, A. C., 27

- Ransdell, Joseph, ix, 59, 85, 93
 Raphael, 278
 Rauch, Irmengard, x, 193
 Ray, William, 365, 367
 Rebekah, 511, 514-517, 537-539
 Reid, Bernice D., xi, 293
 Reiser, S. J., 339, 342
 Reuben, 511, 513
 Reumah, 515
 Reynolds, R., 98, 104
 Rhethore, J., 88, 92
 Ricour, P., 83
 Riedlinger, A., 92
 Riemann, Bernard, 420-421
 Riese, W., 343
 Robins, R., 176, 279
 Rochberg-Halton, Eugene, xiii, 423
 Rodriguez Sala-Gomezgil, Ma. Luisa, xiii, 495
 Roloff, M. E., 442, 447
 Romanell, P., 176
 Root, Elihu, 175-177
 Rosellin, 331
 Rosenberg, J. F., 57
 Rosenblatt, L., 98, 105
 Rosetti, Dante Gabriel, xi, 249, 253-254, 256-258, 260-261
 Rossetti, W. M., 261
 Roth, W. E., 158
 Rubinoff, Lionel, 187-189
 Rubinow, S., 164
 Ruskin, 261
 Russell, Anthony F., x, 179
 Russell, Bertrand, 22
 Ryan, M-L., 57
 Ryle, 23
 Saakjanc, A. A., 228
 Sacks, H., 126-128, 136-137
 Saint John the Baptist, 296
 Saint Nicholas, 296
 Sakellaridou, Irini, xii, 387
 Saldich, A. R., 480
 Salus, Peter H., xi, 201-202, 207
 Sandell, R., 442, 447
 Sapir, Edward, 159
 Sarah, 510, 516-517, 537, 539
 Sarai, 531, 533
 Saussure, Ferdinand de, 5-6, 10, 75, 89-90, 92, 193, 232, 250, 375, 412, 436, 465-466, 472
 Savan, D., 10, 12, 32, 35-37, 86, 93
 Scarpa, Carlo, 332, 334-336
 Schallert, D., 98, 104
 Schapiro, Meyer, 255, 261
 Schegloff, E. A., 126-128, 137
 Schelling, F. W. J., 490-493
 Schiller, F., 169, 173
 Schneider, 91
 Schoeph, B., 472
 Schofield, R. S., 480
 Schopenhauer, A., 369-370
 Schrag, Calvin, 109, 116
 Schroter, M., 493
 Schuchardt, C., 193, 493
 Sebeok, Thomas A., 27-28, 36, 176, 221, 357, 446
 Sechahaya, A., 92, 472
 Serah, 515
 Serres, M., 10
 Shakespeare, W., 62, 206, 377
 Shands, Harley C., v, viii
 Shank, Gary, xii, 319
 Shapiro, Marianne, 15, 20, 464, 472
 Shapiro, Michael, 15, 20, 194-195, 464-466, 471-472
 Shattuck, Roger, 112, 116
 Shechem, 512, 517, 541
 Shelah, 512-513
 Sheridan, A., 457
 Sherwood, J. J., 343
 Shuni, 515

- Sicard, 156
 Siegal, J. P., 156
 Sihon, 523, 525-527
 Simeon, 512-513, 533
 Simmons, Sarah Brey, xi, 301
 Smith, C., 48, 290, 398
 Smith, Kim, ix, 73
 Smith, N. K., 27
 Smith, S., 105
 Sontag, Susan, 278-279
 Spinoza, 174, 184, 187
 Spolin, Viola, 281, 291
 Stam, J. H., 158, 164
 States, B. O., 299
 Stein, R. L., 261
 Steiner, G. 480
 Steiner, W. 249-250, 257, 261
 Stendhal, 364
 Stogaeus, 451
 Stokoe, William C., 162, 164
 Stowe, Harriet Beecher, 206
 Strawson, P. F., 55, 57
 Strehlow, T. G., 158
 Suci, G. J., 207
 Sudnow, D., 128
 Suleiman, S., 116
 Sullivan, Patrick, ix, 83
 Sumner, Charles, 175, 375
 Suphan, M., 493

 Tahash, 515
 Talma, Francois-Joseph, 282, 284, 291
 Tamar, 513, 517
 Tannenbaum, P. H., 207
 Tebah, 515
 Terah, 510, 530, 536-539, 542
 Terrace, H., 348-355, 357
 Terrell, D. B., 27
 Therien, Gilles, 11-12
 Thomas, Dylan, 34-35
 Thompson, Nancy S., xii, 377
 Thompson, T., 529, 543
 Thoreau, Henry David, 206
 Tierney, R. J., 105

 Tigird, Pavel, 315
 Titian, 257, 259-260
 Tobin, J. A., 143, 151
 Tobin, Yishai, xiii, 439-440, 445-446
 Tolstoy, N., 220
 Tomaševskij, Boris, 212, 214-215, 221
 Torretti, R., 330, 336
 Travic, C., 57
 Treece, Henry, 34
 Trist, Eric, 337
 Turner, V., 17, 20, 143, 151
 Tylor, Edward B., 156-159, 162, 164

 Umiker-Sebeok, D. J., 176, 357
 Uspenskij, Boris A., 253, 261, 293-294, 296-299, 440, 447
 Utaker, Arild, 462-464, 466-467, 472
 Uz, 513-515

 Vaculik, Ludvík, xii, 307, 313, 315
 Valéry, P., 17
 Van der Rohe, Mies, 325
 Van Gennep, A., 143, 150
 Van Pelt, J. V., 336
 Van Seters, J., 529, 543
 Vasmer, Max, 223, 228
 Vastokas, J. M., 398
 Vawter, B., 514, 518, 540, 543
 Vennemann, Theo, 1983
 Venus, 255, 257
 Verest, J., 16, 20
 Vico, Giovan Battista, xiii, 483-486, 489-493
 Vincent, C., 16-17, 20
 Vitruvius, 328, 331, 336
 Vladimir, 295-297
 Volek, Bronislava, xii, 307
 Volosinov, V. N., 220-221
 Von Baader, Fr., 483
 Von Sturmer, J., 472

- Walsch, K. W., 11-12
Warburg, Aby, 325
Watson, O. M., 149, 151
Watzlawick, P., 445, 447
Webb, E., 299
Weber, M., 483
Wehr, H., 229
Weightmann, J. and D., 472
Weiner, P. P., 93
Weinrich, H., 15
Weiss, P., 93, 177, 261, 399,
414, 422, 436
Weitzmann, K., 457
Welby, Victoria Lady, 92
Wells, R., 11, 12
Werner, Edgar S., 163
Whorf, Benjamin L., 50-51,
56-57
Wicker, Delancy David, 45
Wicker, Esta Cameron, 45
Wicker, Tom 40, 44-48
Wiener, Morton, 161, 164
Wilbur, T., 193
Williams, F., 48
Wilson, John Cook, 180
Wilson, R., 540, 543
Wittgenstein, L., 77, 328,
436
Wittig, S., 261
Wodak, R., 445, 447
Woolsey, T. D., 176
Wright, Frank L., 334
Wundt, Wilhelm, 157-159, 162,
164, 370

Yahweh, 507, 525, 528
Young, F. H., 93
Young, J. Z., 11-12'

Zavarin, V., 261
Zeman, J. J., 11-12
Zerah, 512, 537, 540
Zeus, 461, 468
Zilpah, 515-516
Ziphion, 515
Zippor, 525
Žirmunskij, V., 228